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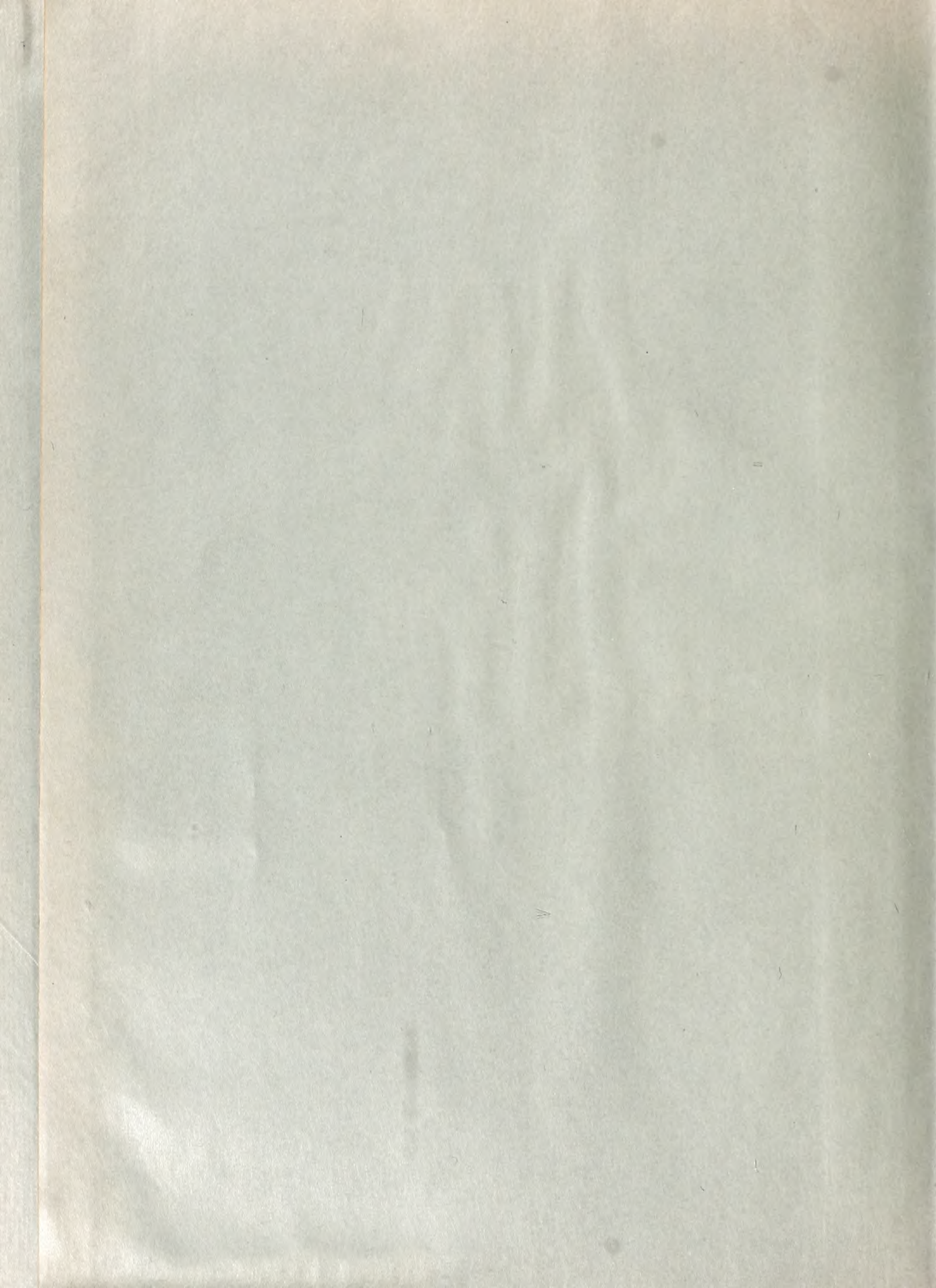




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# NORTH CAROLINA MEDICAL JOURNAL

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VOLUME 12

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NUMBER 1

## GASTROINTESTINAL AND FOOD ALLERGY

*Diagnosis and Treatment*

J. WARRICK THOMAS, M.D.

RICHMOND, VIRGINIA

Gastrointestinal allergy is a clinical manifestation of allergic involvement of the gastrointestinal tract, resulting from direct contact of the mucous membrane with an allergen. However, a gastrointestinal manifestation of allergy may follow exposure to allergens which enter the body through other routes, such as the respiratory tract.

"Food allergy" and "gastrointestinal allergy" are not synonymous terms, although gastrointestinal allergy usually results from contact with food allergens. Such an allergen may also produce asthma, eczema, migraine, or other clinical manifestations of allergy.

Food allergy was noted as early as 75 B.C.; and it was Hippocrates who stated that "Cheese is not always tolerated by all men." Lucretius wrote, "One man's food is another man's poison."

Many competent investigators in the field of allergy<sup>(1)</sup> have estimated that the incidence of gastrointestinal allergy in the general population ranges from 3.5 to 5 per cent, and our experience supports this estimate. Andresen<sup>(2)</sup> has found some evidence of food allergy in as many as 25.7 per cent of those patients with gastrointestinal disturbances. Gastrointestinal allergy may occur alone, or in combination with other allergic manifestations, or coincidentally with organic lesions.

Clinical manifestations of gastrointestinal allergy usually result from the ingestion of foods, drugs, or beverages. These symptoms have been known to follow the oral administration of certain pollen and other extracts, serums or drugs, or the inhalation of certain odors.

### *Symptoms*

Any part of the gastrointestinal tract, as well as its appendages (liver, gallbladder, pancreas, and so forth) may be subject to transitory, variable, and reversible allergic reactions. The symptoms of gastrointestinal allergy may mimic those of any intra-abdominal lesion, especially irritable colon, "colitis," peptic ulcer, gallbladder colic, or cholecystitis. These reactions may be acute or chronic, mild or severe. Fatal reactions have been observed in infants and children.

The symptoms of allergic reactions of the gastrointestinal tract are quite numerous. Rowe<sup>(3)</sup> lists the following: canker sores, distention, belching, epigastric heaviness, "sour stomach," pyrosis, nausea, vomiting, diarrhea, mucous colitis, constipation, "gas in the bowels," pruritus ani, pain and soreness in various sections of the abdomen, and general symptoms of instability, fatigue, and nervousness. The lack of a definite and characteristic clinical picture makes the diagnosis of gastrointestinal allergy difficult in many cases.

Symptoms are affected to some extent by the age of the patient. One of the most common allergic symptoms in childhood is abdominal pain, which usually occurs in combination with other symptoms. Not infrequently we observe mild abdominal pain accompanying an attack of asthma or urticaria. This is of little significance, however, since it may be muscular in origin, and produced by coughing.

Nausea and vomiting vary in severity; some cases are characterized by spitting or regurgitation, while other patients have a severe and projectile type of vomiting comparable with that seen in pylorospasm or

Presented before the Second General Session, Medical Society of the State of North Carolina, Pinehurst, May 3, 1950.

From the Thomas Clinic, Richmond, Virginia.



stenosis. Diarrhea is not an uncommon symptom of acute attacks in children, but one seldom observes in children the recurrent type of diarrhea noted in adults. Acute intestinal hemorrhage may occur in abdominal allergy.

#### *Areas of Involvement*

The type of reaction is probably similar to allergic reactions occurring in other tissues. The antigen-antibody reaction in the sensitized cells of the gastrointestinal tract produces lesions characterized by increased capillary resistance, edema, and diapedesis of the red cells to the extent of hemorrhage. There is spasm of the smooth muscles. The secretion of mucus is increased; and eosinophils may be observed to infiltrate the area or to be present in the mucus.

Thomas and Renshaw<sup>(4)</sup> made proctoscopic observations of allergic reactions in the mucosa, and observed test sites of the rectal valves which could be easily identified, noting changes in color, vascularity, edema, and whealing. These reactions were graded 1 to 4 plus according to the amount of erythema, edema, engorgement of the vessels, and hemorrhage present. Symptoms such as cramps and abdominal distress sometimes resulted from the tests, and severe asthma was seen in one instance.

The portions of the gastrointestinal tract which are most often subject to allergic reactions are the lips, mucous membrane of the mouth, esophagus, stomach, small and large bowel, rectum, and anus. Among the clinical manifestations which may be observed are cheilitis or herpes labialis, canker sores or stomatitis, coated tongue, and angioneurotic edema of the lips, the tongue and mouth, the pharynx, esophagus, stomach, or large and small intestine. Sir William Osler<sup>(5)</sup>, in 1927, found local areas of edema in the bowel wall at operation in a patient with acute abdominal angioneurotic edema.

#### *Diagnosis*

The diagnosis of gastrointestinal allergy is still primarily one of exclusion. Usually one or more associated allergic manifestations can be observed, or a history of allergic disease obtained. In the differential diagnosis, one must consider organic diseases such as appendicitis, cholecystitis or ulcer, and certain common conditions characterized by spasm of the cardia, pylorus or colon. Gastrointestinal allergy may mimic other diseases, and one might find coincidentally organic

difficulties such as atrophic gastritis, biliary dyssynergia, anal fissure, and postoperative adhesions.

Thomas and Wofford<sup>(6)</sup> observed that eructation was the most frequent complaint encountered among 134 patients with gastrointestinal allergy. Abdominal distention, distress, and abdominal pain occurred with equal frequency in approximately 62 per cent of patients with gastrointestinal allergy. Diarrhea and cramps were observed in approximately one third of the patients and eighteen per cent had a combination of symptoms. No single specific symptom was noted as being characteristic of gastrointestinal allergy; however, most of the patients complained of "indigestion."

When the symptoms of gastrointestinal allergy are suspected, one must pursue the same line of evaluating the etiologic factors that is necessary in the other allergic diseases. A detailed history is essential, and one must differentiate symptoms of gastrointestinal or food allergy from those of food intolerance. We know that gastrointestinal irritation and gas result from such foods as radishes, onions, cucumbers, and cabbage. These symptoms are not those of sensitivity, as they frequently occur in nonallergic individuals. One must also differentiate between food allergy and intolerance to fats and sugars resulting from abnormalities of the digestive secretions. Occasionally gastrointestinal allergy results from the ingestion of such simple or stable foods as milk, wheat, and egg. In such cases a repeated occurrence of symptoms may be observed, and after a little clinical experimentation with foods, symptoms may be produced at will.

A complete physical examination is important in order to exclude other nonallergic conditions. Sensitivity tests should be performed, but one must not incriminate a food until its etiologic importance has been proved by clinical trial. A further step in diagnosis is the keeping of a food diary.

Roentgen examination, gastric analysis, gallbladder drainage, and examination of the stools may reveal worth-while information. Moore<sup>(7)</sup> has stated: "Nearly every organ whose function and structure are demonstrable in the normal person by the roentgen ray can be shown to reveal changes due to allergy. But these changes are not specific, they may be transient and variable and may be produced by other causes." In making roentgen studies of the gastrointestinal tract,



it is important to be certain that the initial barium suspension contains no possible allergen. Later, a suspension of barium containing allergens should be given, and the roentgenograms repeated.

According to Swenson<sup>(8)</sup>, "The positive roentgen findings of allergic individuals are: (1) gastric retention; (2) giant mucosal relief pattern (edema); (3) pylorospasm; (4) hypertonicity and hyperperistalsis of the intestine; and (5) segmentation of the lower small bowel . . . According to the majority of observers the most constant of these x-ray findings is gastric retention and edematous relief pattern." Hypermotility is variable. Coincident with the ingestion of a food allergen, the patient may develop asthma<sup>(9)</sup>.

### *Treatment*

The treatment of gastrointestinal allergy consists essentially in eliminating the offending food, or occasionally a drug or inhalant, which may be a specific causative factor. Oral desensitization is of extremely limited value, and in many hands questionable. Symptomatic treatment is similar to that employed in nonallergic gastrointestinal conditions, and includes the control of hypochlorhydria or hyperacidity and the use of certain antispasmodics, including atropine, belladonna, and the barbiturates. In acute abdominal crises, epinephrine in a 1/1,000 solution may be administered hypodermically, or ephedrine may be given by mouth. Antihistamine drugs may be used to offer symptomatic relief and to improve the patient's tolerance for certain foods.

Other allergic manifestations must be treated concurrently with gastrointestinal allergy. Desensitization and hyposensitization with inhalants, molds, pollens, or bacterial vaccines should be employed, and local treatment should be given for skin manifestations.

### *Case Reports*

I wish to illustrate by a group of case reports the following types of allergic involvement of the gastrointestinal tract: aphthous stomatitis, cheilitis, angioneurotic edema of the soft palate, nausea, projectile vomiting, abdominal cramps, rectal pain, hemorrhage from the gastrointestinal tract, and pruritus ani.

#### *Case 1. Herpes of the lips and angioneurotic edema of the mouth and throat*

A 29 year old housewife complained of blisters on her lips when she ate watermelon, and angio-

neurotic edema of the mouth and throat after eating melons and strawberries. In addition, she experienced hives after eating oranges. The above reactions could be produced at will by the ingestion of these foods.

The patient also had perennial bronchial asthma, with seasonal exacerbations due to trees and grasses, and a frank seasonal hay fever in the spring, summer, and fall. Hyposensitization and avoidance of the food allergens satisfactorily controlled her symptoms.

#### *Case 2. Aphthous stomatitis*

A white female, aged 25, gave a history of canker sores which had grown progressively worse over a period of one year. There had been no response to antihistamine drugs or vaccination treatment. Improvement was noted when she eliminated coffee, eggs, peanuts, and chocolate from her diet. At one time the canker sores were controlled with penicillin therapy, but later recurred.

The patient responded satisfactorily to dietary restrictions and hyposensitization with an inhalant, mold, and bacterial vaccine. Definite exacerbations followed the ingestion of coconut macaroons, black pepper, and Italian bread. These were not recognized initially as offending allergens.

The following 3 cases of gastrointestinal allergy occurred in the same family in three generations—grandson, mother, and maternal grandmother.

#### *Case 3. Recurrent canker sores, abdominal discomfort, vomiting, halitosis and constipation*

A 5 year old boy had begun vomiting shortly after birth, while he was on breast milk. He was placed on canned milk, which was well tolerated. He had infantile eczema following the ingestion of egg and apple and orange juice at 6 months. Recurrent canker sores followed the ingestion of chocolate. Apples definitely caused diarrhea, as did fresh corn and peanuts. Halitosis occurred in the absence of a gastrointestinal upset or nasal congestion. Other allergic symptoms were those of perennial allergic rhinitis and seasonal hay fever.

After a year of observation and treatment, the patient's gastrointestinal symptoms were definitely improved, although it was still impossible for him to ingest certain of the foods. He did not have further eczema, and his respiratory allergy was satisfactorily controlled with hyposensitization.

#### *Case 4. Alternating diarrhea and constipation*

A 30 year old housewife complained of alternating bouts of constipation and diarrhea over a period of twelve years, the diarrhea being associated with gas, griping pains, nausea and occasional abdominal tenderness. The diarrhea, which tended to occur every four to five days, usually lasting two days, was characterized by an average of three soft to liquid stools daily. She stated that precipitating factors included beer, lima beans, legumes, corn, bran, onions, broccoli, apples, and in addition paint fumes and certain proprietary drugs including Lextron Ferrous and thiamine chloride. She complained of considerable gas after taking vitamin B complex. In addition to the above symptoms, this patient had a frank perennial allergic rhinitis complicated by secondary headache, a history of urticaria, a questionable dermatophytide reaction of the hands, chronic nervous fatigue or exhaustion, and urticaria secondary to liver injections.



Sensitization studies enabled us to confirm this patient's suspicions of certain foods, and to determine additional food intolerances. The patient was able to control her gastrointestinal symptoms to a certain extent by dietary restriction. There was a large neurogenic and domestic factor in this case, which made the problem rather difficult to handle.

#### *Case 5. Intestinal cramps and nausea*

This 46 year old housewife complained of abdominal cramps, nausea, much gas formation, and bloating and pain. She stated that milk, cheese, and beans aggravated her symptoms, and improvement resulted from the elimination of these foods. Gastrointestinal roentgenograms showed some pylorospasm. Gastric analysis showed no free acid, and a total acid ranging from 0 to 10 degrees following a fractional test meal. Nasal smears showed 40 per cent eosinophils. Other proved diagnoses were migraine, allergy to Benadryl, hay fever in the spring, a history of urticaria, and bronchial asthma, menopausal symptoms, and perennial allergic rhinitis.

Management included dietary restrictions, antispasmodics, estrogenic hormones by mouth, and hyposensitization with inhalant, mold and pollen extracts. The patient was studied again after one year's management, and was followed for another two-year period. She showed only a fairly satisfactory response to treatment, because of the multiplicity of her complaints and her inability to follow the detailed program of management.

#### *Case 6. Abdominal cramps and diarrhea*

A 35 year old truant officer gave a history of mucous colitis following the ingestion of oatmeal, and reported that vegetables, particularly peas and corn, caused abdominal cramps and diarrhea and would pass undigested. Lettuce and fish also produced gastrointestinal distress, which came on from thirty minutes to one hour after eating, and was characterized by nausea, gas, belching, distention, fullness, and pain. Some stools contained stringy mucus. This patient had quite severe asthma of combined intrinsic and extrinsic type which was aggravated by physical agents. She also gave a history of recurrent attacks of asthmatic bronchitis and allergy to sulfathiazole.

Gastrointestinal distress was controlled by dietary restrictions, incorporated with a program of bowel management, including the use of antispasmodics. Partial relief from bronchial asthma was obtained by avoidance of the offending allergens and hyposensitization, including the use of autogenous dust extracts.

#### *Case 7. Cramps, nausea, and vomiting*

A 7 year old girl had had asthma for the first time at the age of 5 months, following whooping cough and pneumonia. Foods were not related to the patient's asthma; however, following the ingestion of milk, egg, or fish, the patient immediately had abdominal cramps, nausea, and vomiting. Infantile eczema was aggravated by ingestion of egg as well as by contact with wool. Although the patient showed a negative reaction to scratch tests with the seafoods, eggs and milk, intracutaneous tests with these foods caused a constitutional reaction in a period of less than five minutes, producing severe asthma, cyanosis, generalized urticaria, and profuse rhinitis. These symptoms were controlled with 0.15 cc. of epinephrine.

#### *Case 8. Abdominal cramps and constipation*

A 3 year old boy, normal at birth, had his first abdominal cramps at the age of 4 weeks, following the ingestion of milk. Various diets were tried.

Homogenized milk begun at the age of 11 months aggravated his symptoms, and Mull-Soy was not tolerated. However, peas, carrots, green beans, squash, beets, and other vegetables caused no trouble. The mother was able to prove definite intolerance to spinach, grapefruit, chocolate, milk, and milk products. A typical attack started three to four hours after a meal, when the patient would start crying with abdominal pain. Sometimes a food might be tolerated for one or two days before causing the patient distress. This patient was able to take the following drugs without gastrointestinal symptoms: Benadryl, ascorbic acid, oleum percomorphum, aspirin, calcium gluconate, paregoric, Syntropan, sulfonamides, milk of magnesia, and various bulk laxatives.

#### *Case 9. Abdominal pain, diarrhea, colic and vomiting*

A 3½ year old child had first shown evidence of allergy at the age of 6 weeks, when the ingestion of orange juice produced colic three or four hours later, followed by diarrhea. The following day she had a erythematous papular dermatitis of the trunk. Several formulas were tried, including breast milk, Carnation milk, Dextri-Maltose, and cow's milk, but all produced episodes of colic. The introduction of spinach, tomato juice, and eggs into the diet produced diarrhea and vomiting. At the age of 6 months orange juice was again administered, with a resulting infantile eczema. About the age of 14 months, raw egg and chocolate were added to the milk, and resulted in a marked infantile eczema. Fish was added to the diet at 15 months without distress. Subsequently, some four months after the patient came under our care, the father gave her chocolate ice cream and she experienced a reaction of marked nasal congestion and wheezing.

The history further revealed perennial allergic rhinitis and asthmatic bronchitis. Later spring hay fever developed.

This is a frank case of gastrointestinal allergy in a child, complicated by other allergic manifestations resulting from a sensitivity to foods and pollens and from respiratory infections. Dietary restrictions were mandatory for the control of acute symptoms.

#### *Case 10. Diarrhea, burning of the mouth and rectum*

A 5 year old child had diarrhea following the ingestion of carrot, with a secondary rash over the buttocks and associated sneezing. The ingestion of spinach produced marked burning of the mouth, and later of the rectum. Peanuts caused definite angioneurotic edema of the face and eyes. Margarine produced angioneurotic edema. Chocolate, and bread containing soybean caused angioneurotic edema of the face and eyes. Marked diarrhea and angioneurotic edema of the eyes followed the ingestion of mavournaise. Later the mother found that mavournaise containing mazola oil was tolerated satisfactorily; she felt that cottonseed oil was the offending allergen in the mayonnaise which caused the reaction.

Sensitization studies and clinical trials revealed that the patient's problem was a combined food and inhalant allergy. Dietary restrictions satisfactorily controlled the gastrointestinal distress.

#### *Case 11. Pruritus ani*

A white boy, aged 8, had a history of asthma and perennial nasal symptoms since the age of 13 months, with seasonal exacerbations during the ragweed season. Pruritus ani and definite rectal irritation followed the ingestion of milk, and these symptoms were relieved when milk was discon-



tinued. In addition the mother reported that this child had definite exacerbations of asthma and rhinitis following the ingestion of prunes.

During an eighteen month period of observation, this patient had very few gastrointestinal symptoms. The control of his respiratory allergy was rather difficult, however. At one time the differential blood count showed 12 per cent eosinophils, and the nasal smear contained 95 per cent eosinophils.

### *Summary and Conclusions*

The diagnosis of gastrointestinal allergy depends upon the exclusion of more common clinical entities, and proof by clinical trial. Therapy includes avoidance of the offending allergens and hyposensitization, as well as symptomatic treatment.

Eleven cases characteristic of the varied symptoms of gastrointestinal allergy have been presented. Most of these patients had additional clinical manifestations of allergy, as well as other types of allergy.

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**Positive skin tests do not necessarily indicate clinical allergy.** Just recently, I saw a little boy, aged nine years, who had diabetes. He looked like a child six years of age. His mother told me that, besides having diabetes, he was also allergic to a whole series of foods, according to skin tests, and that she had had to eliminate these foods from his diet. As a result, the boy was puny, underdeveloped and undernourished. I replaced all the "forbidden" foods in his diet, and he developed no allergic reactions. With a generous and well balanced diet and good control of his diabetes, he has made good clinical progress.—John, H. J.: Dietary Invalidism, Ann. Int. Med. 32:598 (April) 1950.

**The continued responsibility for the care of a chronically sick person adds immeasurably to the education of a physician.** It requires maturity to be able to recognize limitations, to avoid becoming angry because the patient does not get well, to avoid becoming discouraged or discouraging, and to continue to wish to help within the limits of one's ability.—John Romano, M.D., J.A.M.A., June 3, 1950.

## PRESENT DAY TREATMENT OF ALLERGIC CONDITIONS

E. G. GOODMAN, M.D.

WILMINGTON

The histamine concept is the most plausible explanation yet advanced for the allergic triad—mucorrhea, vasodilatation, and smooth muscle spasm. A perfect antidote for histamine has not been found. The numerous antihistamine compounds are only partially effective, and recent reports indicate that they are not as innocuous as was once supposed. Besides causing drowsiness, vertigo, nausea and tremor, plus many other minor symptoms, they have been reported to be responsible for convulsions and death<sup>(1)</sup>, urinary obstruction<sup>(2)</sup>, and agranulocytosis<sup>(3)</sup>. At best, they offer only symptomatic relief.

Convincing proof that histamine antibodies or tolerance to this substance can be produced by giving histamine in increasing doses or histamine azoprotein (Hapamine) has not yet been offered<sup>(4)</sup>. While some favorable reports have appeared, the results are not uniform.

Many new compounds of the epinephrine group are being produced and tested. The chief aim is to preserve the epinephrine effect and abolish undesirable side effects, such as elevation of the blood pressure and stimulation of the central nervous system.

The concept of the adaptation syndrome postulated by Hans Selye<sup>(5)</sup> may explain many of the unknown factors in allergy. Clinically, the general allergic state is manifested by eosinophilia, hypotension, unexplained weakness and fatigue, and uniform improvement following the injection of epinephrine. These four manifestations are also characteristic of the syndrome of adrenal insufficiency. Asthma, in particular, has been shown to respond favorably to ACTH and Cortisone. Perhaps a better understanding of allergy will come about through a study of the physiology of the adrenal cortex. It has long been known that asthma can be completely relieved by obstructive jaundice<sup>(6)</sup>, and it was from the bile acids that Cortisone was first synthesized.

### *Allergic and Vasomotor Rhinitis*

The antihistamine preparations are extensively used for the symptomatic relief of

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nasal allergy. The numerous articles that have appeared are in general agreement that two thirds or more of the patients are definitely benefited. Side effects vary according to the drug and the individual. Quite often, the drug which produces fewer side effects is also less effective in control of symptoms.

Each new antihistamine put on the market is usually hailed by the press as a new cure for hay fever. The public is led to believe that desensitization measures and general management of the allergic patient are no longer necessary. The fact that asthma eventually develops in approximately 30 per cent of the patients with allergic rhinitis makes it unwise to rely on symptomatic treatment alone, even though it is effective. More and more cases are being found in which the allergic rhinitis is fairly well controlled by the antihistamine drugs, until asthma develops; then they are quite ineffective.

#### *Rhinitis due to overtreatment*

Nose drops afford welcome relief from chronic nasal congestion. Mild preparations such as Neosynephrine in a 0.25 per cent solution, are best and should be used for only a short period of time. The more potent vasoconstrictors, when used over a long period of time, may produce in a normal person symptoms and signs indistinguishable from allergic rhinitis, and may aggravate the existing allergy in hypersensitive persons. Quite often it is difficult to persuade the patient that nose drops must be abandoned.

Contact sensitivity due to a chemical agent is illustrated by the following case:

A 47 year old minister was seen because of burning of the eyes, a nasal congestion, and a thin, watery discharge from the nose that "scalded" his upper lip. It was worse at night, especially when he was in his study. Examination revealed an allergic condition of the nasal mucosa, but routine allergy tests were negative. Closer questioning disclosed that he was using eye drops containing Merthiolate (Murine). Symptoms were reproduced by instilling the drops in his eyes, and a patch test with Merthiolate was positive. Symptoms disappeared after he discontinued the eye drops.

#### *The relation of tonsils and adenoids to nasal allergy*

Hypertrophy of lymphoid tissue in the nasopharynx is much more common in allergic than in nonallergic children. Removal of this tissue in children under 5 years of age, or removal without the institution of a program of allergic management usually is followed by prompt recurrence. Lymphoid nodules scattered on the posterior pharynx and around the tonsillar pillars enlarge with

each respiratory infection and often produce a harassing cough, which may in time precipitate asthma<sup>(7)</sup>. This hypertrophied tissue can conveniently be removed by roentgen or radium therapy<sup>(8)</sup>. Surgical treatment is recommended for diseased tonsils, adenoids, purulent sinusitis, polyps, and septal deviation that causes mechanical obstruction.

#### *Asthma*

The lot of the asthmatic patient has been improved during the past decade. My own experience and information gained from others indicate that the severe and long drawn out cases of status asthmaticus seem to be on the decline. This improvement is due largely to the prompt and effective treatment of respiratory infections. Agents such as sulfadiazine, penicillin, streptomycin, Aureomycin and Chloromycetin are indispensable in the management of infectious asthma. What, at one time, amounted to a winter's siege of bronchitis and asthma may now be aborted in a period of days. However, simple asthmatic attacks may go into status asthmaticus because of overtreatment, improper treatment, or sensitivity to drugs employed.

A Gram stain examination should be done on the sputum to determine the predominating organism, as the above mentioned drugs show selective action. The gram-positive and gram-negative cocci, which are commonly encountered in respiratory infections, respond to sulfadiazine or penicillin, while bacillary infections such as Friedländer's bronchitis or pneumonia are best treated by streptomycin, Aureomycin, or Chloromycetin.

#### *Revival of iodide therapy*

The iodides are of undoubted value in the treatment of asthma. Their expectorant action, which thins the tenacious mucus, is certainly physiological. Iodides were the most popular drugs employed for the treatment of asthma before the era of adrenalin and aminophylline. The "Gay treatment" has recently focused attention on this neglected phase of therapy<sup>(9)</sup>. Unfortunately, the Gay formula contains arsenic, which has too many dangerous potentialities for routine use. Insufficient experimental work has been done to determine whether arsenic is an essential ingredient.

With this in mind, I have treated 47 patients with potassium iodide and Fowler's



Table 1

No. Cases	Treatment	Improvement			Reactions	
		None	Good	Excellent		
62	K.I.	11	44	7	Acneform eruption	3
					Rhinitis	2
47	K.I. and Fowler's Solution	6	32	9	Edema of lids	2
					Nausea	2
5	Fowler's Solution	4	1	0	None	

mixture\*, and compared the results with those obtained in 62 patients treated with potassium iodide alone (table 1). To date, 5 patients have been treated with Fowler's solution alone. This is too small a group from which to draw definite conclusions, but the results, as shown in table 1, have not been striking. The 114 patients included in this study are those who had failed to give a satisfactory response to the usual routine of desensitization, elimination, and the administration of agents commonly used for symptomatic relief, such as ephedrine, aminophylline, and related compounds.

It is apparent from this study that the percentage of good results obtained in the treatment of asthmatic patients can be increased by adding potassium iodide alone or a combination of potassium iodide and Fowler's solution. Response to this treatment was prompt, if it occurred at all. More patients are to be treated with Fowler's solution alone before any definite conclusions are drawn, although only one out of the 5 so treated has shown any improvement. It seems extremely doubtful that any synergistic action exists between iodides and arsenic.

#### Antihistamine therapy

The antihistamine drugs are relatively ineffective in treating asthma. They sometimes relieve attacks in children, however, and when they are given at bedtime, many patients report a better night's rest. Whether this is due to the prevention of asthmatic attacks or to their hypnotic effect is controversial.

#### Continuous intravenous aminophylline

Disability from status asthmaticus may be shortened by employment of this method.

Aminophylline (1 Gm. dissolved in 1000 cc. of a 5 per cent solution of glucose or saline) is administered by continuous intravenous drip (2 liters per day) until the dyspnea is relieved and the chest becomes clear. The rate of flow must be carefully controlled to avoid distressing nausea, headache, tachycardia, and a fall in blood pressure. Two to five days of treatment are usually required to break the attack.

#### Demerol

This narcotic, given hypodermically in a 50 mg. dose, does not carry the dangers attendant on morphine and is often of value in the more severe attacks. Caution must be exercised in order to avoid addiction resulting from too frequent or too prolonged use.

#### Migraine

The migraine problem continues to be attacked symptomatically with vasoconstrictors and vasodilators. The etiology of migraine is obscure in the majority of cases. Heredity undoubtedly plays a part; we are all familiar with cases of migraine occurring in mother and daughter. Allergic patients are more prone to have migraine than non-allergic individuals.

Food allergy is considered a major cause; yet this factor is proven in only a small percentage of cases. Infection, which is a leading cause of vascular allergy manifested by urticaria and angioneurotic edema, is usually absent in migraine. Many attacks can be attributed to emotional upsets.

Ergotamine tartrate (0.25 mg.) given hypodermically early in the attack is almost a specific for true migraine. The combination of ergotamine tartrate and caffeine (Cafergone) has been reported as more effective than ergotamine alone, when used orally. The value of appropriate psychotherapy in migraine should not be underestimated.

\* For adult patients, the following prescription was used:

Potassium iodide	Gm., or cc.
Fowler's solution	6
Elixir phenobarbital	5
Saccharin	30
Aqua q.s. ad	240
Sig: Tablespoonful t.i.d. first week	.06
Tablespoonful b.i.d. second and third weeks	
Tablespoonful daily fourth week and thereafter	
for 3-4 months or possibly longer, depending	
on improvement and absence of toxic symptoms.	

### *Urticaria*

The symptoms of vascular allergy, such as urticaria and angioneurotic edema, respond well to the antihistamine drugs. In a given case of urticaria, the following possible factors should be investigated: (1) infection, (2) medications, (3) food allergy, and (4) neurogenic factors. Urticaria occurring secondary to infections presents a difficult problem. An exacerbation during the first few days of treatment may represent a sensitivity to sulfonamides or antibiotics, or may result from a Herxheimer reaction.

The chief value of the antihistamine drugs in the treatment of urticaria is to keep the patient comfortable until the cause is discovered and eliminated.

### *Atopic Dermatitis*

#### *Eczema*

Infantile eczema is still the problem child of allergy. In general, treatment is about as unsatisfactory and uncertain as it was ten years ago. An occasional good result encourages us just often enough to keep us from giving up.

#### *Neurodermatitis*

This condition has its parallel in status asthmaticus, being often resistant to every form of therapy. Neurodermatitis occurs more often in allergic individuals, giving that unhappy combination of allergy and "nerves." The emotional factor is predominant, but the patient, relatives, and some doctors consider nervousness secondary to the dermatitis. A review of 12 typical cases seen recently revealed several points which might be labeled "the neurodermatitis pattern":

1. *Emotional factors out of proportion to the rash are present.* The cutaneous discomfort often precedes the dermatitis. The mental state of the patient resembles an agitated depression. After several weeks of rubbing and scratching, the skin appears as a piece of thick leather.
2. *The usual therapeutic measures fail* and often make the condition worse.
3. *Many overly concerned people are involved*—the patient's spouse, relatives, and nurses.
4. *The patient is usually uncooperative.*
5. *The patient has an unbearable sense of skin dryness* which does not respond to oils.

6. *The patient is refractory to sedation.* Enough sedatives may be given to render a normal person comatose; yet the average patient with disseminated neurodermatitis will stay awake throughout the night and scratch.

The treatment is mainly psychiatric. Poor results are to be expected if one does not take time to unravel the emotional problems. These problems are often quite apparent, but pointing them out to the patient and his family does little good. Frequent psychiatric interviews usually yield better results than dermatologic and allergic management.

### *The Common Cold and "Cold Cures"*

Treatment of the common cold is no longer under medical jurisdiction. The public is being exploited through the press and radio, and self-treatment is preceded by self-diagnosis. The average layman includes the following conditions under the term "cold": grippe, influenza, nasal allergy, sinusitis, adenoiditis, pharyngitis, tonsillitis, laryngitis, bronchitis, asthma, pneumonia, and congestive heart failure.

No objective data indicating that the antihistamines prevent or cure virus or bacterial infections are available. Allergists have noted that, in patients receiving antihistamine preparations for allergic rhinitis and urticaria, coryza develops with approximately the same frequency and severity as in the general population. This entire subject was reviewed recently by the Council on Pharmacy and Chemistry of the American Medical Association<sup>(10)</sup>, and the following conclusions were reached: (1) The evidence so far presented should be classified as the honest opinion of the investigators but not as facts. (2) Until a scientifically acceptable study is performed, the true effectiveness of the antihistamine drugs in the control of the common cold cannot be evaluated.

### *Summary*

Present day concepts concerning the etiology of asthma and the treatment of allergic and vasomotor rhinitis, asthma, migraine, urticaria, atopic dermatitis, and the common cold have been discussed and evaluated.

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## ALLERGIC RHINITIS

MARY MARGARET McLEOD, M.D., F.A.A.P.

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Allergic rhinitis with its various complications is one of the most common diseases of the upper respiratory tract<sup>(1)</sup>. Some of the rhinologists report that 70 per cent of the cases seen in their practice have an allergic basis<sup>(2)</sup>. Often only the complication is recognized and treated, while the primary allergic disease is ignored. The pathologic changes produced by allergy are reversible in children, and hence the results of treatment are better than with adults. The early diagnosis of allergic rhinitis in infants and children is very important, not only to make these children more comfortable but to prevent developmental defects, psychologic trauma, and progress of the allergic disease itself.

### *Symptoms and Signs*

Often allergic rhinitis first manifests itself by nasal obstruction and stuffiness, which cause nursing difficulties<sup>(3)</sup>. Usually the mother next complains that "the baby has a cold every time he cuts a tooth." Later the nasal symptoms may be seasonal (in which case they are called hay fever), or more or less constant and hence designated as perennial allergic rhinitis. These symptoms may start at any time, the incidence perhaps reaching a peak during the second and third years. The majority of victims have symptoms before the age of 10. My youngest patient with typical pollinosis was 3 months old when the condition appeared.

The pathologic changes consist of local edema, hypertrophy, and hyperplasia of the nasal mucosa<sup>(4)</sup>. These changes produce con-

stant or recurrent nasal obstruction and a thin, clear, watery, non-irritating nasal discharge. Often these patients seem to have a cold when they awaken, but by noon their symptoms have disappeared.

All symptoms do not appear in the same patient at the same time. Sneezing and itching of the nose, eyes, and nasopharynx are common. Many of these children develop mannerisms such as rubbing or wrinkling the nose, or facial grimaces due to the nasal discomfort. The nasal obstruction produces mouth breathing, which contributes to fatigue<sup>(5)</sup> and the development of dental deformities<sup>(6)</sup>. The younger the child when the allergy develops, the greater will be the deformity. The edematous mucous membrane can cause obstruction of the eustachian tubes, producing partial deafness and tinnitus. Disturbance of the sense of smell contributes to a poor appetite. Many children with allergic rhinitis have recurrent sinusitis and otitis media. Headaches due to obstructed sinuses occur frequently, and fatigue and general malaise are common complaints.

Perhaps the most constant sign in allergic rhinitis is the presence of an increased amount of mucus in the nasal passages, with an increase in the number of eosinophils in the mucus. The mucus is more gelatinous than normal, and the postnasal drip, with its disagreeable sensations and chronic cough, is created. Early in allergic rhinitis or in the presence of infection the turbinates are a dusky red, but later they become pale and boggy and develop a grayish blue color. The nasal obstruction prevents proper ventilation and drainage, so that bacterial infection enters the picture<sup>(7)</sup>.

Often the acute attacks seem to be precipitated by fatigue, chilling, or an emotional disturbance. Sometimes a clue is missed if we ignore the mother when she says that a very mild exposure, such as swimming, sitting on the sidewalk, or being outdoors on a windy day produced the illness which brought the child to the doctor. A very slight exposure is enough to cause acute otitis media or other acute respiratory infections in the presence of an upper respiratory allergy.

Both the allergic process and the recurrent infections stimulate an overgrowth of lymphoid tissue. The enlarged tonsils and adenoids, in turn, increase the nasal obstruction and prevent proper drainage. With long continued insult the nasal mucosa hypertrophies

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and produces polyps, but this pathologic change is not as common in children as in adults.

### *Patterns produced by acute infections*

According to Feingold<sup>(8)</sup>, an acute infection in an allergic child produces one of two patterns of allergic manifestations, depending on the nature of the infection.

1. With pertussis, measles, chickenpox, mumps, Kaposi's disease, and the epidemic virus diseases, allergic symptoms are aggravated during the invasion period. A child with allergic rhinitis has more severe nasal symptoms. At the peak of these infections the level of allergy is lower than normal. With convalescence allergy recurs, and all the allergic signs and symptoms are more severe than before the onset of the disease.

2. With acute infections of the upper respiratory tract, there is no change in allergy during the invasion period. At the height of the infection, however, allergy is severely aggravated. The allergic symptoms associated with this type of infection do not respond to the usual medical management for allergy. The best response is observed after the use of sulfonamides or penicillin. As the infection subsides, allergic manifestations subside without any specific therapy directed toward the allergy.

### *Diagnosis*

The diagnosis of allergic rhinitis is often delayed or missed when the child is first seen with a complaint which is a complication of the nasal allergy. A careful history, however, often reveals a hereditary background for allergic disease, and in many cases a past history of colic and eczema during infancy. In children who have had recurrent colds and repeated removal of tonsils or adenoids, an upper respiratory allergy should always be suspected. Cases of acute hay fevers which come with sudden onset at a definite time of the year—as, for example, during the ragweed season—are quickly recognized.

Roentgenograms which show some cloudiness of all sinuses are suggestive of allergy. The blood may or may not show an eosinophilia in allergic patients. Nasal smears, if repeated, show an increase of eosinophils in at least 70 per cent of the cases<sup>(9)</sup>. Polymorphonuclear cells may obscure the picture during an acute infection, but with convalescence eosinophils will occur. It is helpful to

remember Dr. Glaser's suggestion "that continuous direct contact of the swab against the mucous membrane for at least one minute will almost always result in positive smears in the case of an allergic mucous membrane."<sup>(10)</sup>

The finding of increased numbers of eosinophils in the nasal smears is pathognomonic of nasal allergy, but a negative smear does not rule out this condition. Skin tests are of great diagnostic help if combined with a detailed history and close clinical observation. Pollens or some seasonal inhalants are the exciting factors in the hay fever group, and quite accurate diagnosis is usual in these cases. With perennial rhinitis many overlapping factors, such as house dust, infections, molds, and multiple allergens, make the picture quite complicated, and patience and time are required to make a complete and accurate diagnosis<sup>(11)</sup>. In many cases elimination diets or other trial-and-error methods are necessary to complete the diagnosis, especially when skin tests are not diagnostic<sup>(12)</sup>. Eye tests are useful in some hands<sup>(13)</sup>.

### *Preventive Measures*

Perhaps we have only grazed the surface in preventive medicine where allergic diseases are concerned. In any family with a history of allergy, the pregnant mother should avoid food excesses, and foods and contacts of the infant and young child should be carefully supervised. New foods should be added to the diet one at a time<sup>(14)</sup>, with long intervals between additions. Household pets and house dust should be avoided in early life. In other words, the onset of allergic symptoms should be delayed as long as possible.

### *Treatment*

Once the symptoms of allergic rhinitis have started, much can be done to alleviate suffering and complications.

The object of treatment is not only to make the patient more comfortable, but to prevent, so far as possible, the progress of the allergic condition and its complications or sequelae, especially asthma<sup>(15)</sup>.

### *General measures*

In the treatment of upper respiratory allergy in children, general management is very important. It is essential that the child be well nourished, even at the cost of some mild respiratory symptoms. Immunizations, adequate sleep, fresh air, sunshine, and a



happy, well adjusted environment are, if possible, more important for the allergic than for the nonallergic child. I always give these children, in addition to iron, a multiple vitamin preparation, such as Vi-Penta. It is important to help the family of an allergic child to plan their vacations. Even the best regulated allergic child may break down in the chilly atmosphere of "Old Baldy,"<sup>(16)</sup> with the double insult of forbidden cornbread and horse dander. Vocational guidance may prevent much unhappiness in later life.

#### *Avoidance and hyposensitization*

The patient should be removed from the allergen, if possible. In any case, if the allergen can not be eliminated or avoided, at least the contact with it can be minimized. In many cases where it is impossible to avoid an irritating inhalant during the day, the child can build up a tolerance to it by sleeping in a dust-free bedroom, so that he can live comfortably even in close contact with the offending allergen some of the time during the day<sup>(17)</sup>. A child can often tolerate a neighbor's dog in the yard, but would have constant nasal symptoms with a dog in the house. The same principle applies in the avoidance of foods to which the patient is sensitive.

Hyposensitization by injection of inhalants and bacterial vaccine has proven to be of great value. Active desensitization with foods has not been satisfactory, however.

#### *Symptomatic treatment*

During acute exacerbations mild decongestants give considerable comfort. Neosynephrine, a 0.125 to 0.25 solution in normal saline, is a great favorite. Recently a 0.5 per cent buffered solution of Pyribenzamine has been reported to give good results<sup>(18)</sup>. Caution must be observed in the use of local therapy, however, as long continued use of drugs often causes irritation of the nasal mucosa and continuation of nasal symptoms.

The antihistamine drugs have proven to be of great value in the relief of some symptoms of allergic rhinitis, but at best they are merely palliative. They should not be given over long periods of time, or when diagnostic tests are being performed. Most of these drugs cause some unpleasant side effects, such as drowsiness or dizziness<sup>(19)</sup>.

#### *Surgery and radiotherapy*

Allergic patients are subjected to special surgical procedures much less frequently

now than formerly, and certainly allergy is a nonsurgical disease. However, if an allergic condition has existed in the respiratory tract for any length of time, some secondary infection is nearly always present, and it must be remembered that allergic therapy will not give relief if organic defects such as hypertrophied lymphoid tissue are not removed or purulent sinuses drained<sup>(20)</sup>. Indications for tonsillectomy and adenoidectomy are the same in the allergic as in the nonallergic child<sup>(21)</sup>. The operation should be done after allergic therapy has been instituted, but not during the pollen season<sup>(22)</sup>.

Gradually we have come to realize that simple surgical removal of tonsils and adenoids is not always sufficient for the allergic child. In fact, if hypertrophied nasopharyngeal lymphoid tissue reappears after careful surgical removal, we suspect an allergic basis. Many of these children obtain marked relief from the use of radium or roentgen therapy. This method of treatment should not be used until after allergic therapy is instituted, however. With proper management of the allergic state, much less surgery and radiation therapy are needed<sup>(23)</sup>.

#### *Antibiotics*

A new era dawned in allergy with the introduction of the antibiotics. Often in allergic disease a vicious circle is established. The allergy lowers the resistance of the mucosa and interferes with ventilation and drainage, so that secondary infection obtains a foothold and, in turn, increases the allergic tendency. Penicillin and the sulfonamide drugs are valuable adjuncts. A nasal discharge which persists after the hay fever season may be due to sinusitis rather than ragweed sensitivity.

#### *Summary*

In diseases of the upper respiratory tract, allergy is the most important single etiologic factor. The history, physical examination, and cytologic studies of the nasal secretions are the basis of diagnosis. Skin tests and careful clinical observations will reveal the offending allergens in most cases. Perhaps preventive treatment begins before the child is born, with supervision of the pregnant woman's diet. Careful supervision of diet and environment during early life delays the onset of allergic symptoms. Once the allergens are discovered, a program of avoidance, hyposensitization and general hygiene, combined with antihistamines, local decongest-

ants, chemotherapy, and surgery and radiation therapy, as indicated, will enable most of these children to develop normally and to avoid many of the complications and sequelae of allergic rhinitis.

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### Abstract of Discussion

Dr. Susan C. Dees (Durham): Bacterial vaccines are very helpful in many of these cases. I think that occasionally they fail because the child has a different bacterial flora with successive clinical

infections, so that an autogenous vaccine obtained during one infection may not cover the situation for successive infections.

Dr. McLeod's description and presentation of this subject is one of the most comprehensive and lucid ones I have ever heard.

## NORTH CAROLINA PREMATURE INFANT CARE PROGRAM

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RALEIGH

For some time the North Carolina State Board of Health and interested physicians have realized that entirely too many deaths occur among premature infants in this state. Deaths due to prematurity are responsible for a major part of the infant mortality in North Carolina, as well as in the United States<sup>(1)</sup>. If the infant mortality rate is to be reduced, some action should be taken to lower the number of deaths among prematurely born infants, and (2) to prevent premature births. This paper is devoted to a discussion of the former objective.

North Carolina's premature infant problem is especially great because this state has one of the highest birth rates in the nation. Since 1944 it has had a higher birth rate than the South or the United States as a whole (fig. 1). In 1947 the number of births in this state reached an all-time high—112,877 being reported. The provisional figure for 1949 was 109,071. In 1947 only four other states in this country had a higher birth rate than North Carolina. If we continue to have one of the highest birth rates in the nation, we can also expect a large number of premature births. For the past three years, the total number of births in North Carolina has not varied by much more than 4,000 from year to year.

The Department of Vital Statistics of the State Board of Health has shown that the infant death rate in North Carolina as a whole is slightly above the average for the United States; however, the infant mortality among the non-white population is lower in North Carolina than in the United States. North Carolina's infant mortality rate also compares favorably with rates in the other Southern states. Prematurity accounts for

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From the North Carolina State Board of Health, Raleigh.



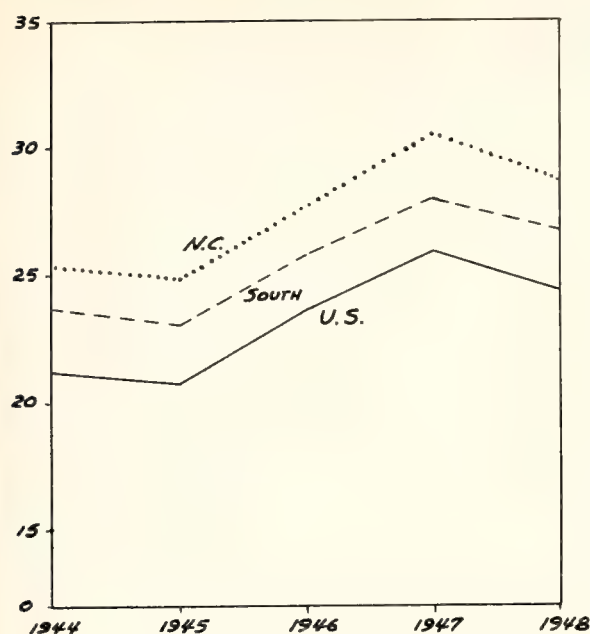


Fig. 1. Crude birth rate per 1000 population: North Carolina, the South, and the United States, 1944-48. (Source: National Office of Vital Statistics)

about one third of the infant deaths in North Carolina, with congenital malformations, influenza and pneumonia, and birth injuries ranking far behind in second, third, and fourth places (fig. 2). The percentage of deaths due to congenital malformations is lower in North Carolina than in the United States as a whole.

In North Carolina premature births account for approximately 33.9 per cent of the deaths occurring in the first year of life, for 50.5 per cent of those in the first month of life (fig. 3), for 54.1 per cent in the first week of life, and for 61.4 per cent in the first day of life. Eighty-nine per cent of the deaths from prematurity occur within the first seven days of life, and a large percentage of these actually occur within the first forty-eight hours. Many of these infants could be saved if they had adequate medical care immediately after birth.

#### *Beginning of the Program*

It was not until after the American Academy of Pediatrics made its survey of child health services in North Carolina in 1945<sup>(2)</sup>

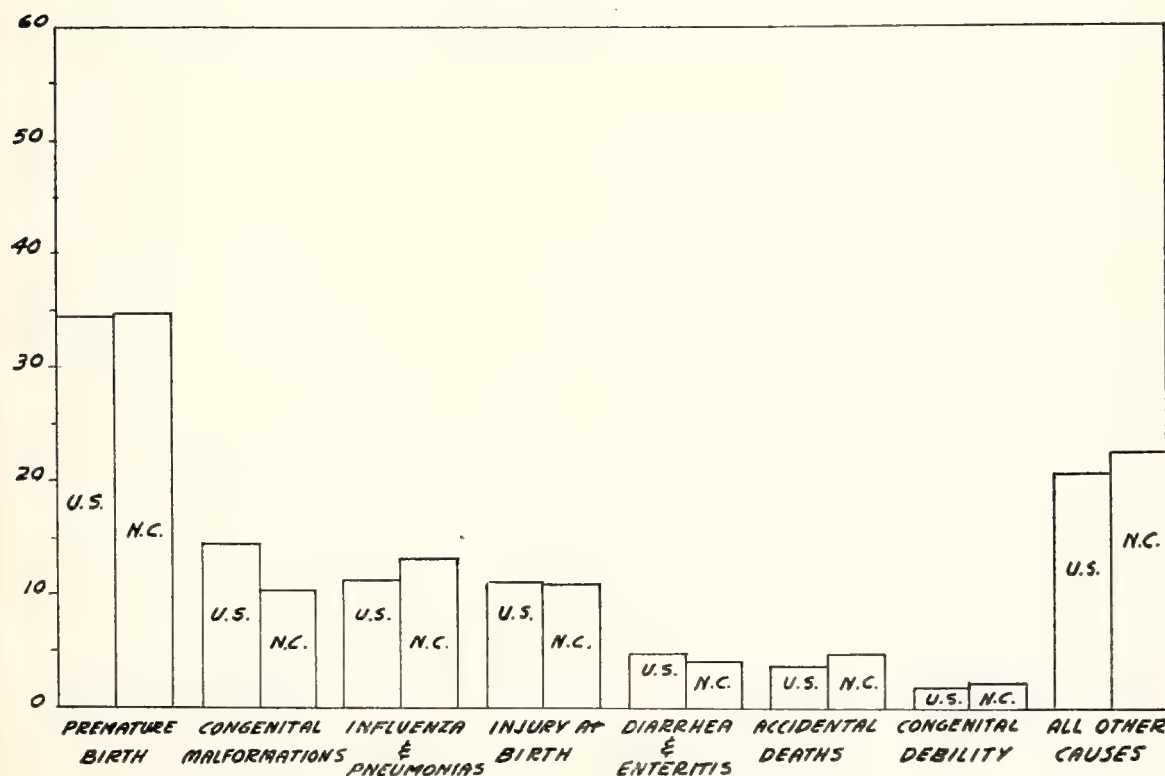


Fig. 2. Percentage distribution of infant deaths by selected causes: United States and North Carolina, 1947. (Sources: National Office of Vital Statistics and the Division of Vital Statistics of the North Carolina State Board of Health)

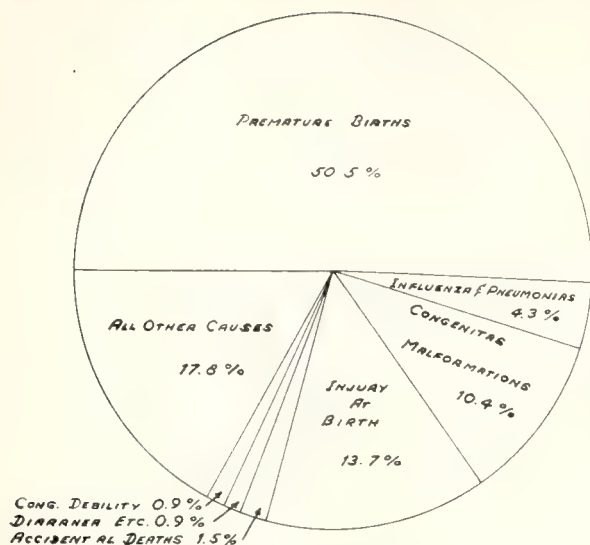


Fig. 3. Causes of death in the first month of life: percentage distribution in North Carolina, 1948.

that any concerted action was taken towards a program for the care of prematurely born infants. It was recommended in the Academy's report that some program for prematurely born infants be instituted. The North Carolina Pediatric Society went on record as approving such a program, and the United States Children's Bureau made funds available to the State Board of Health for that purpose. The premature program was instituted on July 1, 1948, with two hospitals participating—Watts and Duke Hospitals in Durham. A pediatric consultant was employed by the State Board of Health, under the direction of Dr. George M. Cooper of the Division of Maternal and Child Health, to devote his full time to the development of the premature program.

An advisory committee of three physicians, all pediatricians, has been appointed by the State Board of Health to advise on policies of the program. This committee meets several times a year with members of the State Board of Health and representatives of the United States Children's Bureau.

The first consideration was to enlarge the existing premature centers and to open others. Originally, the plans called for seven centers in strategically located areas of the state—one each in Asheville, Winston-Salem, Charlotte, Raleigh, and Wilmington, and two in Durham. At the present time five of these are in operation, and one more has been approved and expects to open by May 8. These

centers compare favorably with the "Standards and Recommendations for Hospital Care of the Newborn Infants" of the American Academy of Pediatrics<sup>(3)</sup>. The State Board of Health has lent a number of incubators to each of the centers. Oxygen is piped into the premature nurseries, and three of the centers are air-conditioned. The supervising nurse in charge of each of the centers has had a period of training in premature care.

#### *Capacity of the Centers*

Biltmore Hospital in Asheville has beds for ten premature infants and will take both colored and white babies. The Baptist Hospital in Winston-Salem, with twelve beds, and Duke Hospital in Durham, with twenty beds, will also take both white and colored infants. Watts Hospital has between twelve and fifteen beds, and will take only white patients. Rex Hospital in Raleigh, which is to open a center on May 8, takes only white infants and has a capacity of seventeen beds. The James Walker Memorial Hospital in Wilmington has just opened a premature center with a capacity of twelve, and will take both colored and white babies. Negotiations are being made with Mercy Hospital in Charlotte to open a twelve to fifteen bed unit.

#### *Eligibility Requirements*

Initially, babies which weighed less than 5½ pounds at birth and whose parents were unable to carry the financial burden for special care were eligible for admission to these centers. At the present time, however, only those infants who weigh less than 5 pounds are eligible for state financial aid in the centers. It is felt that the larger premature babies can be cared for in local hospitals without the specialized care that the premature centers afford. The number of beds in the centers is limited and it is felt that priority should be given to the smaller infants.

The policy in regard to eligibility for financial aid has been revised recently. Initially only the parents in the lower economic group were eligible for financial aid by the State Board of Health. A review of this policy revealed that the centers were admitting premature infants from the lower economic group only, and that parents in the middle income class who needed help in caring for their babies were completely eliminated from participation. The present policy is to admit premature infants weighing less than 5 pounds at birth as applications are made,



until the official capacity of the center is reached. It is left to the pediatrician and admitting officer to determine whether or not parents should make application for financial aid. The parents are given a chance to contribute financially to the program. Parents who wish to participate are allowed to choose a pediatrician from the staff of the hospital center. The pediatrician has to meet the program's qualifications and he is paid on an individual case basis.

#### *Transportation*

Most of the county health departments in the state have aluminum "Praegel" carriers, equipped with hot water bottles and oxygen, for transporting premature infants to the nearest hospital that cares for premature babies or to a premature center. Conferences on the premature program are held in all districts of the state. Nurses from the local health departments attend these conferences and are instructed in the use of the carriers and in the care of the premature infant.

#### *Reporting of Premature Births*

The critical time in the life of a premature baby is the first few days—in fact, the first few hours. It was felt that if premature births could be reported to the health department within a few hours after they occurred, the health department could take whatever action necessary to give aid and, if necessary, to transport the infant to a center or hospital equipped to take care of premature babies. The 1949 legislature passed a bill requiring that the birth of any infant weighing less than 5½ pounds or 2500 Gm. be reported to the local health department within twenty-four hours<sup>(4)</sup>.

#### *Referral and Follow-Up Service*

The care of the premature infant is only a part of the infant care program. Since it is necessary to know what type of home the infant will return to, and whether or not the home is equipped to take care of him, a program of referral and follow-up services was instituted. The supervisor of the premature center sends a request to the local health department in the county of the parents' residence, asking that the nurse visit the home to see that it is equipped for the infant. When the baby is discharged from the hospital, the health department is notified and a visit is made to the home within a few days after the infant's return. The weight of the baby

is checked and a report of its condition is sent to the center and to the State Board of Health. Further public health nursing service in the home is continued as the need arises.

Wherever a premature infant is born out of wedlock and application for aid under the premature program is made, the case is reported to the State Welfare Department. The local health department is asked to request aid from the local welfare department if the need arises. This latter department has cooperated very well with the program.

#### *Aid to Other Hospitals*

Since the premature centers can care for only about one fifth of the premature babies, the majority have to be cared for in local hospitals. In order to improve the care of premature infants in these hospitals, the Board of Health has set aside a sum of money to aid ten hospitals a year in which there is an attending pediatrician. Aid consists in lending the hospital two incubators, and giving a scholarship to one of the nurses to attend a course in premature care. The course lasts from six weeks to two months.

#### *Hospital Teaching Center*

It is planned to give refresher courses in premature care for nurses in county health departments. Scholarships for these courses are given by the State Board of Health. Previously the nurses have had to go out of the state for these courses, as none of the North Carolina hospitals were able to offer such a course. It is now planned to make Duke Hospital a teaching center, and a grant of \$16,000 has been given to that hospital to develop a model, twenty unit premature center. Negotiations are being made with Duke University to include long refresher courses in premature care for nurses other than those in public health. A pediatric nurse with experience in the care of premature infants is to be employed at Duke Hospital to plan and teach a program of study in the care of premature infants, and to conduct institutes in the various premature centers in North Carolina.

#### *Financial Aspects of the Program*

A report on the program up to March 31, 1950, showed that the care of 564 babies had been completed and that the care of 676 cases had been authorized, at an average cost of \$423.00 per infant. This cost seems to be excessive, but the Board of Health pays on a cost basis which varies from \$11.00 to \$14.45

Table 1  
Watts Hospital Premature Nursery Mortality  
Statistics  
1938-1948

Weight Group	Total Admissions	Deaths	Graduated	Mortality
1,000 Gm. or less	40	40	0	100.0%
1,001-1,500 Gm.	66	48	18	72.7%
1,501-2,000 Gm.	114	20	94	17.5%
2,000-2,500 Gm.	221	29	192	13.1%
Total	441	137	304	31.0%

January 1, 1949 to January 1, 1950  
(White Infants)

Weight Group	TOTAL				Born Outside				Born in Hospital			
	Total Admissions	Deaths	Graduated	Mortality	Total Admissions	Deaths	Graduated	Mortality	Total Admissions	Deaths	Graduated	Mortality
1,000 Gm. or less	11	9	2	81.8 %	6	5	1	83.3%	5	4	1	80.0%
1,001-1,500 Gm.	30	10	20	33.3 %	15	2	13	13.3%	15	8	7	53.3%
1,501-2,000 Gm.	61	10	51	16.39%	33	6	27	18.1%	28	4	24	15.0%
2,000-2,500 Gm.	79	0	79	0	11	0	11	0	68	0	68	0
Total	181	29	152	16.02%	65	13	52	20.0%	116	16	100	13.7%

per day. This *per diem* cost includes nursing, drugs and oxygen, and hospital care.

The program this year will cost the State Board of Health between \$250,000 and \$275,000. This money comes from federal sources and there is little likelihood that the appropriation will be increased next year. A number of premature infants are being turned away because we do not have adequate space in the centers. A center in Charlotte is badly needed. It is hoped that there will be enough funds to open one there during the next fiscal year. More funds are also needed to enlarge the program generally. It is hoped that the state legislature will match some of the federal funds to aid us in enlarging the program.

Another possible source of aid is the hospital insurance companies. The insurance companies do not want to participate in the care of prematurely born infants. Most of the companies have a stipulation in their family policy that no infant is eligible for care until sixty days after birth. It is felt strongly that the hospital insurance companies should include coverage for prematurely born infants. The majority of these infants are born in hospitals without premature centers, and have to be cared for there. The premature program cannot give financial aid for the care of infants outside of the centers, because our funds are limited.

### Statistical Reports

Since the program has been started, the rate of premature deaths in this state has already been reduced. In 1948 the incidence of deaths due to prematurity was 34.3 per 100,000 estimated population, while in 1949 it was 24.3 per 100,000 estimated population—a drop of ten points. In 1948, 1,302 deaths due to prematurity were reported, and in 1949 there were only 938. In hospitals where premature centers are located, the mortality among premature infants has been reduced since the center was opened (tables 1 and 2).

Statistics on all the premature infants in the centers are kept by weight groups, and the Division of Vital Statistics of the State Board of Health is compiling figures on reported births by weight groups. Nineteen hundred and forty-nine was the first year in which birth certificates required the birth weight. Out of 106,568 live births there were 7,451 infants weighing less than 5½ pounds—a total of 7 per cent (table 3). The figure usually given for the percentage of premature births is 5 to 6 per cent. There were 11,145 birth certificates in 1949 which failed to report the birth weight. In the first two months of 1950, babies weighing less than 5½ pounds made up 7½ per cent of the total number of births reported.



Table 2  
Duke Hospital Premature Nursery Statistics\*

Weight Group	Total Admissions	1947						Total Mortality
		Total	White Deaths	White Graduated	Total	Non-White Deaths	Non-White Graduated	
1,000 Gm. or less	10	5	5	0	5	5	0	100.0%
1,001-1,500 Gm.	18	11	7	4	7	3	4	55.5%
1,501-2,000 Gm.	37	15	4	11	22	3	19	19.1%
2,001-2,500 Gm.	92	55	3	52	37	1	36	4.3%
Totals	157	86	19	67	71	12	59	19.8%

Weight Group	Total Admissions	1949						Total Mortality
		Total	White Deaths	White Graduated	Total	Non-White Deaths	Non-White Graduated	
1,000 Gm. or less	12	3	3	0	9	7	2	83.3%
1,001-1,500 Gm.	71	21	6	15	50	8	42	19.5%
1,501-2,000 Gm.	72	27	8	19	45	5	40	16.1%
2,001-2,500 Gm.	85	41	1	40	44	1	43	2.3%
Totals	240	92	18	74	148	21	127	16.2%

\* All Groups (White and Non-White, those born at Duke and elsewhere)

Table 4 gives the weight groups of the premature births, during January and February, 1950. The percentage of premature infants in each of these weight groups is comparable with previously published reports<sup>(5)</sup>. Fortunately, the majority of the premature births (69 per cent) are in the weight group above 2000 Gm. or 4 pounds, 6 ounces. Experience has shown that these infants can be cared for outside of the centers, in regular hospital nurseries. It is recommended, however, that they be placed under the care of a pediatrician and a nurse who have had training in premature care. If possible, the premature infants should be cared for in a unit

separate from the regular nursery. They should have the advantage of an incubator and oxygen, and should be protected from infection by good isolation technique. Some of the premature babies have to remain at home for varying periods of time. Most health departments have emergency kits which can be used to aid such infants. It is strongly recommended that infants weighing less than 2000 Gm. be admitted to a premature center, or if no beds are available there, to a hospital equipped to care for premature infants, with a pediatrician in attendance.

Prior to the institution of this program very few infants weighing less than 3½ pounds at birth survived in this state. Now an increasing number of infants whose birth weight was below this figure are able to graduate from the centers. The smaller the infant, the more liable it is to birth injuries, and we have an unfavorable report from one hospital on the outcome of two infants in the weight group 1000 Gm. (2 pounds, 2 ounces) or less. However, the smallest of the premature infants that survived under the program is now 8 months old, weighs 15 pounds, and is doing well. This baby weighed only 1 pound, 10 ounces at birth.

Table 3  
Incidence of Premature Births in North Carolina\*

1949		
Live Births	Premature Weight (5½ lbs. or less)	Incidence of Premature Births
106,568†	7,451	7%
January and February, 1950		
Live Births	Premature Weight	Incidence
14,125	1,057	7.5%

\*Source: Division of Vital Statistics, North Carolina State Board of Health.

†The weight of 11,145 of these infants is unknown.

Table 4  
Births Reported for January and February, 1950, by Weight Groups

Weight	No. Births	Percent
1,000 Gm. or less (2 lb., 3 oz. or less)	43	4%
1,001-1,500 Gm. (2 lb., 4 oz.-3 lb., 4 oz.)	85	8%
1,501-2,000 Gm. (3 lb., 5 oz.-4 lb., 6 oz.)	198	18.7%
2,001-2,500 Gm. (4 lb., 6 oz.-5 lb., 8 oz.)	731	69.1%

#### Plans for the Future

1. The number of centers should be increased. Charlotte needs one, and there should be one in the middle eastern part of our state—in Kinston, Fayetteville, or Greenville.

2. Long term follow-ups on the premature infants cared for under this program should be instituted. Questionnaires are to be sent

out to parents of premature infants when they are a year old, and at yearly intervals thereafter.

3. We hope to offer, in the future, institutes on prematurity for physicians as well as for nurses.

### *Summary and Conclusion*

A state-wide public health program to care for prematurely born infants in North Carolina has been described, and it has been shown that the success and continuing need of the program warrant its expansion.

In closing I wish to give credit particularly to two physicians whose foresight, advice, and guidance made this premature program a reality. They are Dr. George M. Cooper, director of Maternal and Child Health Services of the State Board of Health, and Dr. Arthur H. London, Jr., regional chairman of the American Academy of Pediatrics.

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### *Abstract of Discussion*

**Dr. Arthur Hill London, Jr. (Durham):** I feel that the most essential part of a premature center, once it is properly equipped, is a nurse who is trained in premature work and is interested in caring for these babies.

As Dr. Murphy has shown you, the mortality among premature infants has been reduced considerably in the centers. Eventually, of course, the mortality will reach an irreducible minimum. We have to recognize that a certain percentage of the children in the lower weight group are going to die on the first day of life. If they survive the first day, then it is incumbent upon us to try to keep them alive.

In the higher weight group the greatest menace is infection, and I believe that the marked reduction in the mortality among this group is definitely due to the practical elimination of true infections in the premature centers. This has been accomplished by having nurses interested in the program, and by keeping all other personnel out of the premature nursery, so far as possible.

There is a question, of course, as to the advisability of transporting a premature infant to one of these centers. Moving one of these babies, even in a portable incubator, is unquestionably a hazard. On the other hand, I think we can definitely state that the hazard of moving such a child is not nearly as great as the hazard of keeping it under unfavorable circumstances. The ideal situation would be for all hospitals to have the equipment and the personnel to take care of the premature infants in their own communities, so that we can eliminate the hazards of a long trip.

As always, there are bad things associated with the good. Before the premature center at Watts Hospital was opened, we had never seen a case of retinal fibroplasia. In the past year, by virtue of the fact that we are saving some of these premature babies, we have had two children with this condition.

**Dr. Robert B. Lawson (Winston-Salem):** I would like to ask Dr. Murphy what is the incidence of retinal fibroplasia in this state, in comparison to the rather high incidence in Boston and New York, in children weighing less than 1500 Gm.

**Dr. Marion Y. Keith (Greensboro):** May I ask what is the lowest birth weight that is compatible with survival?

**Dr. John L. Ward (Asheville):** I would like to have some explanation of the fact that Negro infants are not going to be admitted to some of the premature centers. Unless adequate provision is made for colored as well as white babies, I think that government help should be withdrawn from the nurseries.

**Dr. Murphy:** In reply to Dr. Lawson's question about retinal fibroplasia, I am sorry that I do not know the incidence in this state. We are planning to make a survey of all children weighing less than 3 pounds who have been treated under this program, to see what the percentage may be in that class. As we know, retinal fibroplasia does not always progress to complete blindness. It may stop at any stage. Perhaps the explanation for the higher incidence in the North is the fact that the babies are examined earlier up there, and consequently more cases of beginning retinal fibroplasia are recognized.

More work needs to be done on that problem. Vitamin E has been thought to be a panacea for it, but there is some evidence now that ACTH may help.

With regard to Dr. Ward's question, we have felt that if one center in a certain area has facilities for colored patients, it is not necessary to insist that all the centers in that area admit Negro babies. We hope that in the future, however, all the centers might take colored infants.

**Dr. J. B. Sidbury (Wilmington):** Are babies weighing more than 5 pounds excluded from the premature centers?

**Dr. Murphy:** Babies weighing as much as 5½ pounds can be admitted to the centers, but we don't give financial aid for any baby weighing more than 5 pounds. We feel that the larger infants can get along pretty well in local hospitals and do not need the premature center as much as the smaller ones. We want to put our money where it will do the most good.

**Dr. Sidbury:** And where is the graduation point?

**Dr. Murphy:** That is left up to the pediatrician. Most of them at Duke Hospital, I believe, are allowed to leave the center at 2200 Gm., which is around 5 pounds.

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**Management of the Epileptic**—The risk of making the patient feel different from others must be weighed against that of accidents. The epileptic, of course, cannot hold a driving license. If liable to attacks during the day he should not ride a cycle on crowded roads. He should not swim unless accompanied by someone who knows his disability and who can take care of him, and he should not go into a crowded swimming-bath. No other restrictions need be imposed unless the attacks are exceptionally frequent.—Sir Charles Symonds: *Management of the Epileptic*, *Brit. M.J.* 2: 1047 (Nov. 4) 1950.



## TREATMENT OF FIBROSITIS IN THE NECK AND SHOULDER WITH MICROTHERMY (RADAR)

GEORGE DARWIN WILSON, M.D.

ASHEVILLE

### *Diagnosis of Fibrositis*

Fibrositis, an inflammatory condition of the fibrous tissues, may be primary or secondary in type. In my experience both types are characterized by a triad of findings: (1) pain, (2) hypotension, and (3) neuropathy.

Fibrositis of the neck and shoulder region commonly involves the occipital nerves and the brachial plexus. Brachial fibrositis<sup>(1)</sup> is characterized by tenderness over the brachial plexus, above and below the clavicle, and by pain on abduction of the arm.

Patients with fibrositis of the neck and shoulder commonly complain of headache, pain in the arm, inability to move the arm without pain, pain in the elbows and wrists, and numbness or tingling in the fingers. There may be aching below the nape of the neck or over the triangular area centered on the seventh cervical spinous process. Another symptom is inability to rotate the head or flex the neck without pain. Patients state that the muscles are especially stiff in the morning, and that the pain becomes less severe after exercise, returning gradually about mid-afternoon.

Fibrositis is characteristically unilateral, one side of the neck and shoulder being more painful than the other. Fibrositis in the shoulder is often associated with bursitis, frequently subdeltoid bursitis; with peritendinitis; or with perineuritis most commonly involving the axillary nerve, less frequently the occipital and radial nerves. Nerve roots at the level of the fifth and sixth cervical vertebrae are especially vulnerable to fibrositis of the deep neck muscles, with resultant paresthesia.

Fibrositis of the cervical muscles may be responsible for another seldom considered condition—that of phrenic neuritis, which is usually unilateral. When scalene muscles are contracted as a result of fibrositis, the phrenic nerve may be pinched, and the involved side of the diaphragm is seen to be elevated by fluoroscope<sup>(2)</sup>.

### *Examination of the patient*

At the first examination, it is well to use a simple protractor or goniometer to measure the limitation of motion in the neck and shoulder. This gives an excellent guide to the severity of muscle stiffness or spasm, and affords a definite yardstick by which to measure the patient's improvement. The three basic shoulder motions measured are forward flexion, abduction, and posterior flexion or hyperextension with the patient in the standing position. The degrees of rotation and flexion of the neck are measured with a goniometer.

With the patient sitting on the edge of the table, the digital examination begins. The examiner places his hands on the nape of the neck, and moves his thumb with the fibers of the cervical portion of the trapezius muscle. Pressure is added gradually to elicit fibrositic nodules. Firm pressure with the finger tip just below the superior nuchal line at the exit of the greater or lesser occipital nerves may produce occipital neuralgia, which the patient complains of as headache. The deep reflexes of the biceps, triceps, or wrist may be altered. A radiculitis or paresthesia over one or more branches of the brachial plexus can sometimes be mapped out by pin scratch. Weakness of the hand grip may be measured with a hand dynamometer.

### *Characteristics and Advantages of Microthermy*

Microwaves are high frequency radiations emitted at a frequency of 2,450 megacycles per second, with a wavelength of approximately 12 cm. They have optical properties and can be reflected, refracted, and diffracted<sup>(3)</sup>. They can be selectively absorbed. Other workers have demonstrated that the penetration of microwaves into the body produces an ideal form of deep heat. It has been demonstrated<sup>(4)</sup> that the temperature and flow of blood are increased in extremities exposed to microwaves. Osborne and Frederick<sup>(5)</sup> reported 24 experiments on human subjects which showed that the average temperature at a depth of 2 inches immediately following microwave irradiation was 104.2 F. (40.1 C.).

While the cautions and contraindications applicable to all types of medical diathermy<sup>(6)</sup> should be observed in the use of microthermy, this method offers several advantages to the physician desiring a deep or penetrating type of heat. High frequency radiations are con-

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ducted from a multicavity magnetron tube by a coaxial cable through one of three types of directors to the uncovered area of body under treatment. The use of the microwave director avoids the necessity for cables, drums, or pads, with toweling intervening between the skin and the electrodes. The treatments produce very little erythema of the skin or discomfort. The application of microthermy is less likely than short wave treatments to produce pain over neuritic areas.

### *Use of Microthermy in a Series of Thirty-Eight Cases*

During the past three years I have obtained satisfactory results by treating fibrositis of the head, neck, and shoulders with microthermy. This paper is based on a series of 38 cases treated by microthermy. Comparison with a previous series of cases treated by short wave<sup>(7)</sup> indicates that in both secondary and primary types of fibrositis relief is obtained sooner from microthermy, and that fewer treatments are necessary for recovery.

The present series contains 34 cases which were considered secondary fibrositis, and 4 of primary fibrositis. Both groups of patients in this series presented a common triad of findings: (1) pain, (2) hypotension, and (3) involvement of the sensory and motor nerves in the upper extremity.

The average age of the patients with secondary fibrositis was 54 years, and this group contained 21 men and 13 women. Associated conditions included arthritis and faulty metabolism. The average blood pressure of this group of patients was 128 systolic, 75 diastolic. In 30 cases the axillary nerve was involved unilaterally, although 3 of these patients presented bilateral paresthesia. The right side of the body was more frequently involved in this series.

Four cases in which no associated pathologic condition was demonstrable, and in which a history of unusual physical strain was obtained, were considered primary fibrositis. These patients—one man and 3 women—were first seen more than three days after the onset of pain in the neck and shoulder region. Their average age was 32 years. The average blood pressure was 121 systolic, 68 diastolic. Paresthesia over the axillary nerve was found in all 4 cases, and was unilateral in 3 and bilateral in one. Paresthesia over the radial nerve distribution was found in 2 cases. All patients in this group had roentgen

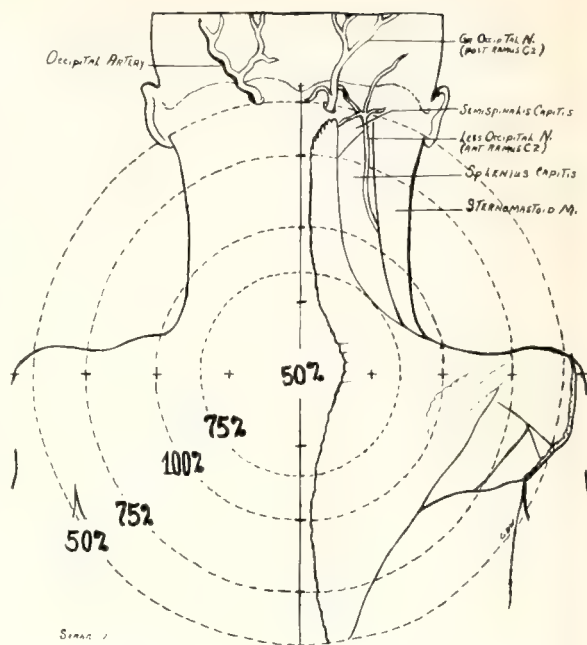


Fig. 1. Surface heat pattern from microwaves applied to the back of the neck and shoulder, with director B 2 inches from the skin.

studies to rule out a fracture dislocation of the cervical and upper dorsal vertebrae.

### *Method of treatment*

Hemispherical director B, 6 inches in diameter, was found most practical for the treatment of fibrositis of the neck and shoulder areas (fig. 1). It was employed at a distance of 2 inches from the bare skin, as recommended by the manufacturer\*. The patient was placed on a wooden table, and all adhesive tape, metal jewelry or ornaments, and dressings near the field of exposure were removed before treatment. The period of exposure was thirty minutes—ten minutes to each cervico-clavicular area and to the back of the neck. The patient was always advised to inform the therapist or physician of any unpleasant sensation, tingling, or aching, and if such sensations were noted, the amount of radiation was lowered. After the first exposure, patients usually asked for more heat.

It is well to state that, regardless of automatic timing devices, the patient and machine should be inspected frequently by the physician or therapist during any type of diathermy treatment. This precaution is especially important in cases with peripheral nerve involvement. In some cases the first application of microthermy aggravated the neuritic

\* Raytheon (Microtherm) Manufacturing Company, Wortham, Mass.





Fig. 2 (Case 1). Application of microthermy to the right cervicoclavicular area. Areas of hypoalgesia are mapped on the right arm; dotted lines show improvement three days after first treatment.

pains during the first few minutes of treatment. After three to five minutes the nerves usually became adjusted to this penetrating heat, and the patient was comfortable. If the patient still complains of neuritic pain after the first five minutes of treatment, the output should be cut down until the patient is comfortable.

The treatment was repeated two or three times a week (twice a week in the patients with secondary fibrositis, three times weekly in the patients with primary fibrositis) until relief was obtained. There was found to be no advantage in giving treatments daily.

### Results

In the group of 34 patients with secondary fibrositis symptomatic recovery, as determined by goniometric measurements of joint motion, hand dynamometer readings, and testing of the sensory nerve pattern by pin scratch, occurred after an average of five microthermy treatments given twice weekly. The 4 patients with primary fibrositis required an average of four exposures to microwaves.

For relief of pain sufficient to allow a good night's sleep, an average of three treatments was required in the group of secondary cases, and one in the group of patients with primary fibrositis. Subjective relief could be closely correlated with increases in the range of joint motion and in the strength of the hand grip, and with a diminution in the areas of paresthesia.



Fig. 3 (Case 1). Application of microthermy to back of neck. Three days after the treatment the nerve pattern in the forearm is restored, and the pattern in the upper arm (indicated by dotted lines) is improved.

In one patient with hypertension the blood pressure gradually leveled off during treatment, although it had failed to respond to medications given over a period of several years. Two patients had an associated Dupuytren's contracture, the fourth finger of the right hand being contracted in both cases. Both patients obtained full extension of the fingers after microthermy.

No burns or side reactions were encountered. The oral temperature was determined by standard clinical thermometers before and after twenty to thirty minutes' exposure to microthermy, and was found to be unchanged.

### Illustrative Cases

#### Case 1 (Primary fibrositis)

A 26 year old white woman was involved in a minor automobile accident, in which her head was suddenly jerked forward and then backward. She drove home and had no complaints until fourteen hours later, when, on attempting to arise, she was unable to lift her head from the pillow, or to move her arms without pain. Examination eighteen hours later, including roentgenologic studies of the cervical vertebrae and skull, revealed no fractures or dislocation of the cervical vertebrae.

When the patient was referred to me three days after the injury, she was unable to rotate or flex the neck, or to forward flex or abduct either shoulder. She complained of pain in the base of the neck, across the shoulders, and radiating down both arms to the finger tips.

Digital examination revealed a tender, tight, and painful scalenus anticus bilaterally. Digital pressure

on the scalene muscle caused pain to radiate down both arms and forearms. The blood pressure was 116 systolic, 78 diastolic. Sensory nerve examination by pin scratch revealed hypoesthesia over both axillary and radial nerve patterns in both arms. There was a palpable, localized area of induration, which was painful to pressure, in the middle of each trapezius muscle. The hand grip, measured by a dynamometer, was 70 pounds in the right hand, 52 in the left. The limitation of neck flexion and rotation, and of shoulder motion was measured by a goniometer and recorded. On the basis of the neurologic findings the site of the fibrositic neuritis was localized at the level of the fifth and sixth cervical vertebrae.

Microthermy was applied to the right and left cervico-clavicular areas (fig. 2) and to the back of the neck (fig. 3), ten minutes' exposure being given to each site. On her second visit three days later the patient stated that she had slept without sedatives the night after her treatment with microthermy. Re-examination on this visit showed the areas of hypoesthesia to be much smaller in size (fig. 2 and 3). The grip in each hand was 70 pounds, which is considered normal for a woman of her age.

### *Case 2 (Fibrositis secondary to osteoarthritis)*

A 44 year old surgeon came to my office on May 23, 1949, complaining of inability to operate or to hold his right arm up for examination procedures because of pain in the right shoulder and neck. He gave a history of having had wryneck while serving in an army hospital in 1945, and again in 1948. The present pain was described as located in the base of the skull and deep in the neck, with radiation down the right arm to the hand. He could not hold instruments firmly, and at times felt as though his hand were asleep. He stated that the pain had become progressively severe during the past week. For a week he had been taking vitamin B<sub>1</sub>, 100 mg. per day, along with multiple vitamin capsules, without results.

A complete dental survey made two days before he consulted me had revealed no abnormal findings. Thorough roentgenologic studies were done, and the report was as follows: "Spine: This study was made with AP and lateral projections, as well as right and left oblique projections. Minimal very small osteoarthritic spurs were noted at margins of bodies of C-5 and 6. The oblique film shows considerable reduction in size of the spinal foramen between 3rd and 4th segments on the right. This is caused largely by osteoarthritic spur formation at the margins of the adjacent bodies. Right shoulder: No bone or joint abnormalities are detected."

Physical examination revealed limited abduction of the right shoulder, with pain at 100 degrees and a decrease in the pulse rate at 110 degrees abduction. Hand dynamometer readings were 56 pounds in the right hand, 112 in the left. Sensory nerve examination by pin scratch revealed hyperesthesia over the right axillary and radial nerve patterns.

Following a ten day vacation, during which the patient failed to show any improvement, he reported for treatment by microthermy. He was given three treatments a week for a total of seven treatments. At the end of this time the sensory nerve disturbances had disappeared and he had recovered his hand grip. Both scalene muscles were palpably softer and were no longer painful to pressure. Full range of motion in the right shoulder was regained. One year later this patient was still free of pain.

This is a representative case of fibrositis secondary to osteoarthritis, in which a fibrositic brachial neuritis was benefited by microwave therapy.

### *Summary*

Thirty-eight cases of fibrositis in the neck and shoulder (4 primary and 34 secondary) were successfully treated by exposure to microwaves (radar). The common triad of findings in this series of cases was: (1) pain, (2) hypotension, and (3) involvement of the sensory and motor nerves of the upper extremity. Objective criteria of recovery were restoration of full joint motion, as measured by goniometry; return of normal sensation over areas of paresthesia mapped out by pin scratch; and an increase in the power of the hand grip, as determined by a hand dynamometer.

Microthermy was applied by director B at a distance of 2 inches from the bare skin. Treatments were directed to each side of the neck anteriorly and to the back of the neck, each site being exposed for ten minutes. Oral temperature was unchanged by thirty minutes' exposure to microthermy, and no burns or undesirable reactions were encountered.

The author wishes to express his appreciation to B. J. Mullen, R.N., R.P.T.T., for assistance in preparation of this article.

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### *Motion Picture Chronicle of Medical Meetings*

First in a series of "Tele-Clinics," motion picture reports on medical meetings of national and international significance to the medical profession, has been produced by Wyeth Incorporated, Philadelphia pharmaceutical firm.

The first "Tele-Clinic," released throughout the country this week, features high lights of the Fourth General Assembly of the World Medical Association, which convened in New York last month. The production is a thirty-five minute, 16 mm., black and white sound film which spotlights and reviews the important conferences and business sessions of the five day World Medical Assembly.

A schedule of films to be produced during 1951 is now being prepared. It is planned to film many of the major medical meetings in cooperation with the various medical societies, and to distribute these films periodically.



## RECENT TRENDS IN THE DIAGNOSIS AND TREATMENT OF CANCER OF THE LARYNX

GEORGE B. FERGUSON, M.D.

DURHAM

There are many milestones along the path of medical progress, some of them monuments to achievements which have changed the course of medical history, and others merely markers along the slow and careful path of some particular branch of medical science. In medicine, outstanding milestones marking such achievements as the work of Koch and of Pasteur, the discovery of anesthesia and of antisepsis, of vaccination and of salvarsan, and, more recently, of the sulfonamides and the antibiotics, have attracted the attention and caught the imagination of physician and layman alike. These are the great, spectacular discoveries.

The physician must never forget, however, the steps which have led to the slow but sure advance. The field of cancer particularly is marked by such an advance. In 1807, when Bozzini introduced a mirror arrangement permitting indirect inspection of the larynx, a milestone was passed in the early diagnosis of cancer of the larynx. Subsequent changes have altered the light source and improved the reflecting surfaces of this mirror, but the original idea has remained unchanged.

In 1829 Babbington devised a direct laryngoscope. Ehrmann performed the first laryngofissure operation for cancer of the larynx in 1844, and Billroth the first laryngectomy in 1873. The indications for, and the limitations of, these two operations were at first poorly understood, and few successes were experienced until after 1900. From that time forward, the accumulated experience of careful observers established criteria for the selection of patients to be subjected to these operations, and the percentage of good results increased.

Most important of all, however, were the teachings of those pioneers who passed on to the profession in general, and even to the lay public, certain rules or maxims that led to the earlier diagnosis of this disease. The pro-

fession came to accept Jackson's dictum that hoarseness of more than a month's duration must be considered a sign of cancer until the condition is proved to be otherwise. His dramatic statement that "Death lurks under an over-hanging epiglottis" served to point up the need for prompt and expert diagnosis in this hidden yet accessible area—accessible, that is, to the man trained in the use of the laryngoscope and the laryngeal mirror.

Unfortunately, the sulfonamides and the antibiotics—two recent, outstanding discoveries marking milestones in the course of *general* medicine—have no place in the treatment of cancerous growths, and, when applied to the therapy of undiagnosed hoarseness, may well lead to delay in the institution of suitable treatment. It would seem advisable, therefore, never to use the antibiotics in any cases of hoarseness of more than a month's duration, until the absence of cancer has been fully and carefully proved. Delay at this stage may necessitate a far more mutilating operation, or may permit the growth to become incurable.

The importance of early diagnosis is obvious. All large centers now report five year cures in 80 to 85 per cent of early cases of cancer of the larynx. The cure rate drops lower and lower as the disease progresses.

### *Incidence and Classification of Malignant Growths of the Larynx*

MacKenty<sup>(2)</sup> has stated that malignant disease of the larynx forms from 2 to 3 per cent of all malignant tumors, and 16 per cent of all laryngeal tumors. Ninety-five per cent of all malignant laryngeal growths are of the squamous cell type. The remaining 5 per cent are made up of adenocarcinomas, basal cell carcinomas, sarcomas, and undifferentiated types. Ninety per cent of the cases of laryngeal cancer occur in males, and those over 40 years of age are far more susceptible than younger persons.

Cancers of the larynx may be divided into four groups<sup>(1)</sup>, according to their location:

1. Intrinsic growths, limited strictly to the true vocal cords
2. Endolaryngeal growths, occurring in the ventricle or on the ventricular bands, on the aryteno-epiglottic folds, on the interarytenoid space, or growing across the anterior commissure
3. Subglottic growths, situated below the level of the vocal cords

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From the Department of Otolaryngology, McPherson Hospital, and the Department of Surgery, Division of Otolaryngology, Duke Hospital, Durham.

4. Extralaryngeal growths, found on the epiglottis or on the posterior aspect of the larynx.

Eighty per cent of all cancers of the larynx are intrinsic; they start on the vocal cords and produce immediate impairment of voice quality. Hoarseness may vary from the slight roughening produced by small growths to almost complete aphonia when the growths are large. It is sometimes difficult to judge *early* changes in voice quality. The patient, accustomed to his own voice, may note such changes when the doctor, less familiar, will not. Hoarseness may vary in intensity even while growth of the lesion continues. Such factors as rest of the voice and the subsidence of intercurrent acute infections may cause improvement in the voice and lead to undue optimism, especially if the improvement coincides with the administration of medical treatment.

In the 20 per cent of laryngeal cancers which start in areas other than the vocal cords—that is, the endolaryngeal, the subglottic, and the extralaryngeal growths—hoarseness is *not* an early symptom, and will be detected only when the cord or the arytenoid joint is invaded. In these cases the earliest symptoms may be extremely vague. However, throat discomfort, painful swallowing, or pain which radiates to the ear should excite suspicion. In intrinsic cases of cancer metastasis occurs relatively late, because drainage from the cords is scanty. Elsewhere, however, the larynx is richly supplied with lymphatics, and metastasis may occur early.

#### *Methods of Treatment*

The problem of selecting the proper method of treatment would be greatly simplified if all cases of cancer of the larynx could be diagnosed early. Incipient cancers (those which are confined to one vocal cord and which have not spread to the arytenoid or across the anterior commissure) are suitable for the conservative laryngofissure operation. This operation preserves the larynx, and the patient is left with an adequate, if somewhat roughened, voice. Larger intrinsic growths, still small by many standards, and all extrinsic growths invade so much of the larynx that conservative surgery can no longer be trusted, and total laryngectomy or irradiation must be employed. In cases in which the patient is too old or too infirm for laryngectomy, irradiation is the only hope.

Recent reports from some roentgenologic clinics<sup>(3)</sup> suggest that radiation has a special field of usefulness when the growth is too large for laryngofissure, but when the mobility of the vocal cords is preserved. In these cases, the results claimed for roentgen therapy are equal to those of total laryngectomy—that is, about 60 per cent five year cures—without the mutilating effects of the operation. In more advanced growths, total laryngectomy, alone or combined with radical dissection of the glands of the neck, and post-operative irradiation may be employed.

#### *Is There a Trend Away from Early Diagnosis?*

In spite of widespread dissemination of information about cancer to the general public, we will always be faced with the problem of the patient who neglects himself. It is distressing to see such patients, and to realize that fear or ignorance has prevented more timely medical assistance. It is of utmost importance that we, as members of the medical profession, lead the way to early recognition of cancer; yet a study of my own personal series of cases would suggest that the present trend is away from early diagnosis.

A comparison of the ratio of small or early growths to the larger or late growths can be made by comparing the ratio of conservative operations (laryngofissures) to that of radical operations (laryngectomies). Of the malignant tumors of the throat seen by me in the years 1937 to 1950, there were 105 cases which primarily involved the larynx. Of these 102 were squamous cell carcinomas, 1 was a basal cell carcinoma, and 2 were sarcomas. The patients included 8 women and 97 men. Of this group, 65 were considered suitable for some operative treatment. In only 20 patients was the diagnosis made early enough to permit the conservative laryngofissure operation, while in the remaining 45 the disease had either started its growth outside, or had grown beyond the limit of the vocal cord. Since 80 per cent of all cancers of the larynx are intrinsic, it seems more than likely that the larger number of growths in these 45 cases demanding laryngectomy had begun on the vocal cords and had extended beyond their limits.

In the 20 cases in which a laryngofissure was possible, the average interval between the onset of hoarseness and operation was twelve weeks; three weeks was the shortest,



and thirty-two weeks the longest interval between the onset of hoarseness and this conservative operation. In the 45 cases in which a laryngectomy was necessary, the average duration of hoarseness was fifty-two weeks, six weeks being the shortest and 156 weeks the longest interval between the beginning of hoarseness and operation.

After excluding operations for growths other than squamous cell cancer, I have divided the operative cases into two groups: (1) those treated between 1937 and 1947 (prior to the widespread use of antibiotics), and (2) those treated between 1947 and 1950. From 1937 to 1947, 27 operations—16 laryngofissures and 11 laryngectomies—were performed—a ratio of 1.4 conservative to 1 radical operation. Between 1947 and 1950 the picture was altered drastically. Of 38 operations performed, 4 were laryngofissures, and 34 were laryngectomies—a ratio of 1 conservative to 8.5 radical operations.

Although statistics may be misleading when a relatively small number of cases is recorded, it seems unlikely that this factor alone could account for so marked a shift. Since the welfare of a large number of patients is involved, we must try, at least, to search out the reasons for *any* trend away from early diagnosis.

### Summary

1. Eighty per cent of laryngeal cancers begin on the vocal cord and produce early hoarseness.

2. Twenty per cent of laryngeal cancers begin in "silent areas."

3. Early diagnosis leads to preservation of laryngeal function, and of life itself.

4. I have noted a trend away from early diagnosis, which statistics seem to couple with the use of antibiotics.

5. The sulfonamides and antibiotics should never be used in any case of hoarseness of more than a month's duration, unless the absence of cancer has been fully proved.

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Trained employees are more valuable to an organization than new employees, and periodic health surveys may prevent many physical disasters and prolong the working life and capacity of faithful workers. Edward I. Salisbury, M.D., F.A.C.S., New York State J. Med., September 15, 1950.

## SUGGESTIONS FOR THE IMPROVEMENT OF GENERAL PRACTICE

WILEY S. COZART, M.D.

FUQUAY SPRINGS

This paper is presented in the interest of salvaging the lost art of making a diagnosis and instituting treatment without the aid of complete laboratory facilities and a group of specialists to consult. For years to come in North Carolina, we general practitioners must depend upon ourselves, good office equipment, and the best office personnel that we ourselves are able to train. As I see it, one of the greatest needs in the field of healing today is better practice of medicine "on the spot." By this term, I mean where the sick patient is first seen—in the home or in our offices.

### *The Need for Better Medical Service in Rural Areas*

Sixty-five per cent of the population of North Carolina today is rural; yet there are now less than a hundred physicians practicing in the rural areas of the state. Do you wonder that the people ask for state medicine, or something that will serve them? More than a million of our people are still without proper medical care. In my opinion, it should be against the law to deliver a baby in the home; a physician who does so should be considered guilty of obstetric malpractice. Yet I am forced to make home deliveries.

The rural population of our state is making wonderful progress in all other lines of endeavor. They live in better homes, with electricity and plumbing; they have access to good roads, and to consolidated schools, and soon they will have telephones, thanks to Governor Scott. They have increased their acreage yields and are now entering into new fields of beef production, dairy farming, and other diversifications. It seems that these rural people are being denied nothing in life except good medical care.

### *Possible Solutions to the Problem of Rural Medical Care*

What is the solution for this problem? While I know of no panacea to suggest, I do

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believe that the situation can be improved—and I am going to try to make some definite recommendations.

#### *The establishment of clinics in small communities*

These forgotten people can be better served in their sickness through better planned office practice, and through the establishment of small hospital clinic in smaller communities. In North Carolina, as in every rural state, there is a need for better medical services offered the public at, or near, their homes. The smaller communities of North Carolina are not going to be denied complete medical service much longer. We should accept the challenge of the public, pool our professional interests, and build group offices and clinics.

We in Fuquay Springs are more fortunate than those in many areas, in having hospital facilities only twenty miles away—in Raleigh. Too often, however, I am unable to get my patients admitted to a hospital. A few times within recent years, I have had very ill patients for whom I was not able to obtain hospital care. This situation is by no means peculiar to my practice.

One answer, which I suggested earlier, is the establishment of small town clinics through the help of the Medical Care Commission. Unfortunately, the Commission is not sympathetic toward small hospitals operated by no more than five doctors. They say they are substandard. If three or four doctors, pooling their efforts and knowledge, do substandard work in a hospital, how much more substandard is the work done by the individual doctor without hospital equipment and consultants?

Last year, when we attempted to obtain funds from the Medical Care Commission to help establish a clinic in Fuquay Springs, we were given a cold reception. In just a few years, there is going to be a famine of doctors in the smaller communities of our state. We should look toward the examples of the Dakotas, Iowa and Wyoming, and establish small clinic hospitals. They have been successful in those states.

#### *Better office practice*

I have been trying to help the situation by caring for a greater number of patients in my office. Twenty-five per cent of the patients usually referred to hospitals can be treated in the office and the home if the

physician is only willing to work out a diagnosis and a plan of treatment.

I rarely refer patients with poisoning, fractures of an extremity, industrial trauma, and surface infections. We now have available a very choice line of antibiotics. I keep these in my office, and administer during the day such drugs as are indicated. The result is the relief of much suffering, convenience to myself, and less cost to the patient.

#### *The Importance of High Standards for the General Practitioner*

The doctor in any community, regardless of its size, is looked upon as a leader because he is an educated man. For this reason, medical students should be hand-picked, and have at least a fair personality. The doctor should dress well and have good habits.

To my mind, it is the poorest sort of economy for a physician not to avail himself of the best facilities he can afford; yet a high percentage of the doctors in our state have a most inadequate office setup. After a doctor has been in practice for a few years and has met some of his more pressing financial obligations, surely he is able to provide himself with a modern office and efficient office personnel. Many doctors, very soon after beginning practice, will invest in stocks, bonds, farms, and real estate; yet they are satisfied with a dirty office and poor office organization. In view of the long hours that a doctor must spend in his office, and the fact that medicine should be the first love of every doctor, it seems that the promotion and expansion of this art should take foremost place in his heart, and in the economic planning of his life.

#### *Suggestions for the General Practitioner's Office*

In my opinion, a doctor's office should be located on the ground floor. I would not have an office on the second or third floor—rent-free and furnished. Climbing stairs and waiting for elevators takes a great deal of the doctor's time and energy, and does not improve his patient's disposition. The location should be in a vicinity which is not too noisy and which affords ample parking space.

Plans for the doctor's office should be drawn by a good medical architect. *Medical Economics* will recommend one in your area. The office should consist of seven or eight rooms: the physician's private office, an



operating and treatment room, a combination x-ray and laboratory room, two convalescing rooms, a white and a colored waiting room, and possibly a business office. There should be a separate entrance to the operating room for accident and emergency cases. I can make an x-ray and get a tentative reading on a fracture case in twenty minutes after the patient enters my office.

The office should be comfortably heated, and complete electric facilities should be provided.

#### *Office personnel*

I have in my office a secretary, a nurse, and a "trouble-shooter." My secretary has been with me for fourteen years, and has a remarkable memory. She takes good dictation and is an excellent speller. A good secretary is worth more to you than you are to yourself. My nurse has been with me for ten years. She is capable, industrious, meets the public well, and does not complain when called back to the office for emergencies. Every office of any size needs a "trouble-shooter." When things go wrong mechanically and electrically, he may be called.

#### *Equipment*

The waiting rooms should be furnished with bright, cheerful furniture. Good reading material, heat, and fans will help to make the patients comfortable.

The doctor's private office should be quiet, preferably on the back side of the building. The physician's chair should be comfortable and his desk adequate in size, and neat and clean.

Every doctor's office should be equipped with a good microscope, and he should remember that it is there for use. Nowadays there is a strong temptation to send feces, blood stains, and even warm sperm to the State Laboratory for examination. A good nurse is easily taught to do a number of these examinations. I have a good laboratory and refrigerator for vaccines in my office.

My operating room is equipped with Westinghouse roentgen apparatus, an otolaryngologist's treatment chair and stand, a sterilizer, and diathermy apparatus.

#### *Treatment of Patients in the Office*

The doctor should be willing to sit back in his chair and listen to the patient's story. The doctor who is a good listener won't need to make so many examinations. The patient

himself will make 50 per cent of the diagnosis, if he is only given the chance.

I believe that any good physician can make a thorough physical examination if he is interested, if he has good equipment, and if he will train his office nurse to assist him. Life insurance examinations are quickly done and provide an easy source of income.

#### *Treatment of gynecologic conditions*

For eroded and ulcerated cervixes, I use local applications of a 2 to 25 per cent solution of silver, fulguration, acid douches (for the patient to use at home), sulfathiazole tampons, and gentian violet, together with any systemic medications that are indicated.

While I realize that the practice is not approved by gynecologists, I do remove organized and unorganized, detached and attached products of conception in my office. I use placenta forceps and curettement, sometimes injecting Novocain into the anterior lip of the cervix where I am going to place my tenaculum, but more often, giving no local or general anesthetic. Since most of these cases are infected, I mop out the inside of the uterus with tincture of Merthiolate or iodine. These patients get well.

I am reasonably certain that most uterine hemorrhages, which occur in all stages of adult life, are due to endocrine imbalance and endometrial hyperplasia. When a trial of calcium, iron, ergotrate, and other supportive measures gives no relief, I curet the cervix and pack gauze tightly around the cervix and inside the vagina, but never inside the uterus. The gauze is removed the next day. I seldom have these scrapings examined, unless I suspect malignancy.

Salpingitis was the biggest field of medicine when I first began practice in 1915. Today this condition is easily cured with sulfonamide drugs, penicillin, and iron. I use large doses of penicillin in oil, with 2 per cent aluminum monostearate. I have been fortunate in that I have had few reactions to a sulfonamide or to penicillin, and none severe enough to require hospitalization.

#### *Treatment of other conditions*

While I realize that most cases of sciatica are due to a ruptured disk, I still believe that conservative treatment should be given a fair trial. I inject the sciatic notch area with a 2 per cent solution of Novocain in normal saline. Then I put the patient face down on a bed with a diathermy coil over the area for about two hours, repeating this treat-

ment every two or three days. I recommend crutches, mustard plasters at home, vitamins, a good diet, and a dose of salts every morning. Most of these patients get well.

In cases of poisoning I am not too much concerned with antidotes, as most of the poisons have already made new organic compounds in the stomach. I siphon the stomach at once with a stomach tube, using apomorphine, mustard and ipecac to hasten the emptying. Then I think about specific antidotes, and treat the patient supportively in one of my convalescent rooms for the rest of the day. Before beginning to wash the stomach, one should be sure that the tube is in the esophagus and not in the trachea.

I have removed a considerable number of hemorrhoids with a 3 per cent solution of Novocain. When this is injected into them, they roll out and can be easily clamped, tied, and removed with a diathermy cutting knife. I keep these patients in my office throughout the day, then send them home with plenty of analgesics.

A great number of patients with cholecystitis, with and without colic, may be kept from the operating table by nonsurgical drainage of the gallbladder. I lay the patient on his right side and drain the gallbladder for about four hours, using repeated injections of a magnesium sulfate solution in the tube.

Patients with colic should have their pain eased. I put them in a convalescent room in my office and try to work out a diagnosis during the day, meanwhile using heat, dilaudid, and other sedative drugs to relieve pain.

I make a chest film in all cases of pleurisy.

Since I am not satisfied with any treatment for asthma after these thirty-five years of practice, I usually refer these patients. Aminophylline helps in some cases; Nethaphyl, in others. I have found that the iodides are the best treatment yet available, if they are continued for a sufficient length of time.

#### *Referral of Patients to Specialists*

When it is necessary to refer a patient to a specialist, the general practitioner should select those doctors who will work with him. He should let the specialist know that he is interested in following the case along with him, and is willing to share some of the responsibility. We have a number of very fine specialists in Raleigh and Durham, and it

would be most difficult for me to carry on my work without the help I get from Duke.

#### *Conclusion*

When I pass the mantle of practice to the shoulder of my son in July, I will have just three admonitions for him.

First: Go to church; be public spirited.

Second: Cultivate good relations with your brother doctors.

Third: Go to every good football game in North Carolina, and get your Duke-Carolina tickets early.

#### *Abstract of Discussion*

Dr. Oscar W. Goodwin (Apex): I would like to stress especially the importance of one aid to the general practitioner—and that is a good nurse in his office. I happen to be fortunate enough to have one of those, and rarely do I have to suggest to a patient who comes into my office that she have a complete examination, because most of them are expecting such an examination. The nurse has it all arranged, so that it is a matter of course.

Recently, I have had 3 patients who have left good doctors because they didn't offer to give them a complete physical examination. One of them had high blood pressure, and the doctor told her that low backache contributed to the high blood pressure, but did not make a pelvic examination. I think this is inexcusable. If we are going to make any headway in the control of cancer, we must find it early; and the responsibility for finding it early falls on the shoulders of us who see the patients first.

As Dr. Cozart said, good office equipment is absolutely essential to good work, and this is one point which we can use in educating our patients to come to the office instead of asking us to go to their homes.

There are two points that we should not forget, however. In this day of mechanization, most of us want to have our diagnosis cut and dried; we don't want to work to dig it out. Often in the rush of the day's work, we do not take a good history and keep good office records. To my mind, records are just as essential to good practice as good office equipment. A thorough history taken the first time a new patient is seen, and recorded for future reference is one of the greatest assets that any general practitioner can have.

Last but not least, let us not forget that the patient is still a human being, and let us not fail to show him that, whether we find a streptococcus or a pneumococcus or an influenza virus, it is he, after all, that we are most interested in.

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The individual with an ulcer diathesis is, in my experience, not externally discernible; it is an oversimplification of the facts of medicine to say that you can spot the ulcer patient by his facies or his demeanor. That obviously worrisome striver whom you suspect may have a digestive tract of iron resistance but be a hypertensive or a future coronary victim, he may pay the penalty entirely within his nervous system, or he may go on to old age, completely unpenalized. Conversely, the externally calm and placid individual often has a burrowing peptic ulcer of undetermined etiology.—Sara M. Jordan: An Evaluation of the Peptic Ulcer Problem, M. Ann. District of Columbia 17:326 (June) 1948.



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1951

January 1, 1951, marked the beginning of the second half of the twentieth century. The first half has been perhaps the most memorable one since the birth of Christ.

Medicine has witnessed revolutionary discoveries and inventions. The various chemotherapeutic and antibiotic agents have accelerated the shift of emphasis from the infectious diseases to the so-called degenerative ones. Cortisone and ACTH promise to point the way to a still different approach to disease. They are, however, keen-edged tools that need to be used with extreme caution until we have become more familiar with them, and have learned to evaluate their power for harm as well as for good.

With so many new remedies at our disposal, it is pertinent to recall Dr. Logan Clen-

dening's masterly address, "Resistance to Change as a Contribution to Medical Progress," delivered before the Connecticut State Medical Society in 1942. One of the most important qualities needed by a medical man is the ability to keep his balance: balance between theory and practice; between psychic and somatic; between ultraconservatism and overenthusiasm. One of the best presidential addresses ever presented to our State Medical Society was Dr. William MacNider's, in 1926, on "The Balanced Mind in Medicine."

It is distressing to see World War III threatening before World War II has really ended. Here, again, it is necessary to keep one's balance between wishful thinking—the sort of optimism that refuses to face facts—and an unreasonable pessimism that considers another world war inevitable. That man should be destroyed by the modern array of Frankenstein monsters he himself has created is too horrible to believe. If man can not find for himself a way out of the dilemma he himself has brought about, does he deserve to survive? Rather than fall into extreme pessimism or extreme optimism it is better to choose the middle ground of facing facts with courage, and to adopt the motto of Napoleon that an obstacle is something to be overcome. There are obstacles aplenty in the pathway of peace—but there are other ways of overcoming them than by brute force. Napoleon also arrogantly said that God was on the side of the heaviest artillery; but he lived long enough to learn that he was mistaken.

It was at the end of the last century that Kipling wrote his masterpiece, the "Recessional"; and in the middle of this century it would be well for both Britain and America to remember his warning:

If, drunk with power, we loose  
Wild tongues that have not Thee in awe—  
Such boasting as the Gentiles use  
Or lesser breeds without the Law—  
Lord God of Hosts, be with us yet,  
Lest we forget, lest we forget!

For heathen heart that puts her trust  
In reeking tube and iron shard—  
All valiant dust that builds on dust,  
And guarding calls not Thee to guard—  
For frantic boast and foolish word,  
Thy mercy on Thy people, Lord!

## "LOCKSLEY HALL"—ONE HUNDRED AND TWENTY-FIVE YEARS AFTER

Someone has said that the poets are our modern prophets. One who doubts this statement should read—or re-read—Tennyson's *Locksley Hall*. This poem, written more than a century ago, forecast with remarkable accuracy the use of airplanes, both for commercial and for combat purposes.

For I dipt into the future, far as human  
eye could see,  
Saw the Vision of the world, and all the  
wonder that would be;

Saw the heavens fill with commerce,  
argosies of magic sails,  
Pilots of the purple twilight, dropping  
down with costly bales;

Heard the heavens fill with shouting, and  
there rain'd a ghastly dew  
From the nations' airy navies grappling  
in the central blue.

In contrast to the poet's uncanny foresight, one of the leading scientists of his day wrote, near the turn of the century, an article proving to his own satisfaction, by all the then-known laws of physics, that it was impossible for bodies heavier than air to fly, and suggesting that the Wright brothers give up their quixotic attempts and do something useful.

Today many so-called hard headed realists are equally skeptical as to the next part of Tennyson's vision, that which enabled him to foresee a successful United Nations:

Till the war drums throb'd no longer, and  
the battle flags were furl'd  
In the Parliament of man, the Federation  
of the world.

There the common sense of most shall hold  
a fretful realm in awe,  
And the kindly earth shall slumber, lapt  
in universal law.

Since the first part of the poet's prophecy came true, is it too much to hope that the second may also be realized? It is encouraging, at least, to know that such a philosopher as Bertrand Russell agrees with Tennyson's view. In an article in the *New York Times Magazine* for December 31\*, Mr. Russell denies that war is inevitable, and asserts that "only an increase of intelligence is needed to avoid disaster."

Mr. Russell is sure that wars will not go on forever, and believes that the day will come "sooner than most people think, when the human race will allow itself to be happy and will decide to have done with the outworn enmities that at present make it im-

possible to enjoy what our knowledge and skill have made possible. Instead of feeling oppressed by the sense of a malign destiny dooming us to disaster," he asserts, "we ought to feel a new sense of human power, of capacity to master a reluctant environment, and to learn the difficult art of living together in the same world without mutual hatreds."

Does not Mr. Russell say again that "the common sense of most" will finally prevail, "and the kindly earth shall slumber, lapt in universal law"? And is it too much to hope that Tennyson's vision was just as clear when he foresaw a successful United Nations as when he envisioned aviation?

\* \* \*

## DR. GEORGE M. COOPER

In the passing of Dr. George M. Cooper, the North Carolina medical profession has lost one of its most useful members. From the time that he was made part time county physician of Sampson County in 1909, and used for the first time in North Carolina mass vaccination against typhoid fever, Dr. Cooper has been in the very forefront of the fight against disease through public health measures. Under his direction North Carolina became the first state in the Union to have birth control clinics sponsored by the State Board of Health. For this he was given, at the 1949 meeting of the American Public Health Association, the Lasker Award for outstanding achievement in planned parenthood.

Dr. J. W. R. Norton said of Dr. Cooper:

"North Carolina has lost its greatest Public Health Official of all time. He served longer, engaged in more activities and did more to make North Carolina Public Health conscious and to minister to its Public Health needs than any man in the history of the State. He pioneered more Public Health services than any other man I know, not only in North Carolina but in the nation. Both personally and professionally he had few peers, if any, and no superiors anywhere. His was constantly an up-hill fight against ignorance, misinformation, indifference and short-sighted selfish interests. The two greatest groups of his beneficiaries were under-privileged mothers and children, in whose behalf he not only worked unceasingly and for whose relief he was instrumental in securing millions of dollars in public funds, which he administered where they would do the most good among the greatest number of people. During his service with the State Board of Health, the maternal death rate was reduced to one-fourth and the infant death rate to one-half of those rates prevailing in North Carolina when his service began. This progress was due to the work of many devoted physicians and assisting personnel; Dr. Cooper was the patient planner, the dauntless and resourceful leader, the tireless worker."

Surely Dr. Cooper deserves to be among the elect of whom the Spirit said, "that they

\*"To Replace Our Fears with Hopes"



may rest from their labours; and their works do follow them."

\* \* \*

## PHYSICIANS' OBLIGATIONS TO REDUCE HOSPITAL COSTS

The February issue of this journal reprinted an editorial from the *New York State Journal of Medicine* on the costs of hospitalization. Another editorial along the same line in the issue for July 1 is so timely and thought provoking that it, too, is lifted bodily from the columns of our Yankee exchange for the edification of our readers.

\* \* \*

A tangible service to patients is within the control of many physicians; namely, lowered costs for laboratory work. Says the President of New York County Medical Society, in part:<sup>1</sup>

Many a patient finds that his total bill for an illness may involve a very considerable charge for a battery of tests performed to accumulate a voluminous mass of diagnostic data. The new trend, too, is to have the patient undergo an entire "check-up" in diagnostic centers—even when critical illness is not at hand—as a measure of preventive medicine. This, again, is as it should be. Yet again there is no doubt that such a comprehensive series of laboratory procedures all adds to the price paid by someone for medical care . . . by the public, by health agencies, by the hospitals, or by the private patients.

Without trying to fly against the advancing winds of medical progress, one may reasonably ask for a bit of reflection on the blanket orders sometimes issued for laboratory tests which—on second thought—promise to aid the diagnostician only slightly, which may sometimes by their very abundance confuse the issue, and which always increase the cost of illness for the patient.

There is an understandable emphasis on elaborate clinical diagnostic procedures among younger physicians—fresh perhaps from a residency in a major university teaching hospital where they had only to lift a finger to have harassed technicians turn out the work. That was part of their post-graduate medical education and gave them the training and experience they will need later. Moreover, this reliance on the objective information thus available is a desirable thing . . . as information.

But diagnosis is a mixture of information plus judgment. As these younger physicians come to work with their own patients in their private practice, they gradually learn that a second and a third look at the patient and their experience in physical diagnosis will often reap rewards in attaining the correct decision without confusing the issue with a host of laboratory data and at a considerable saving in cost to their patients. Never forget that the cost of medical care is a major issue of medicine today.

One must add, immediately, that laboratory work, if it is truly needed, must never be sacrificed merely on the basis of cost. Admittedly, too, the margin between enough laboratory work and an overabundance is sometimes a narrow one. Nevertheless, for those who err on the side of ordering too much laboratory work it is well to remember that the world had good diagnosticians before they were born.<sup>(1)</sup>

While no one contends that the patient's financial interest is paramount, it is a definite and, we believe, a growing obligation of the physician to assist in cutting costs in his patient's behalf wherever possible. This cannot be emphasized too often. Excessive fees and indiscriminate prescribing of expensive drugs, as well as unnecessary laboratory procedures, open the profession to justifiable criticism. There is, as Dr. Keating remarks, an art and science to the practice of medicine. The best over-all care of the patient—medically and economically—is the proper blending of the two.

Anything which physicians can do to help lower the cost to the patient without sacrificing the quality of medical care is most meritorious. Sensible planning in the numbers and types of diagnostic tests to be ordered for the patient is one starting place to achieve this end.

<sup>1</sup> New York Medicine, April 5, 1950, p. 22.

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## NEW YORK STATE JOURNAL CELEBRATES GOLDEN ANNIVERSARY

The *New York State Journal of Medicine* began its existence at the very first of this century, and so is celebrating its Golden Anniversary with Volume 51, Number 1 (January 1, 1951). It is appropriately dressed for the occasion in a gorgeous golden cover. The leading article, by Dr. Laurance Redway, summarizes the history of the journal. This is followed by a symposium, "A Half Century of Medical Progress," with papers, by authorities in their respective fields, on the progress made in internal medicine, surgery, and various special branches of medicine—including aviation medicine.

The last page of this issue is used by Editor George W. Kosmak to discuss "The Next Fifty Years in Medicine." He says that "We may know what is needed, but how close we come to the achievement of the goal is something that we hope to present in the centenary number of this *Journal*." The NORTH CAROLINA MEDICAL JOURNAL extends to the *New York State Journal of Medicine* its heartiest congratulations upon its Golden Anniversary; and to Dr. Kosmak the wish that his hope may be realized, and that he will present in the centenary number the medical progress made in the next half century.

## BULLETIN BOARD

### WATTS HOSPITAL MEDICAL AND SURGICAL SYMPOSIUM

The following program will be presented at the Eighth Annual Watts Hospital Medical and Surgical Symposium, to be held at the Carolina Theater in Durham, February 14 and 15.

#### Wednesday, February 14

- 9:00 a.m. Address of Welcome—Mr. S. B. Forbus
- 9:30 a.m. Clinical Pathologic Conference—Warner Sheldon, M.D., Associate Professor of Pathology, University of Pennsylvania, Philadelphia; Barton R. Young, M.D., Associate Professor of Radiology, Temple University Hospital, Philadelphia; Waldo E. Nelson, M.D., Professor of Pediatrics, Temple University Hospital, Philadelphia.
- 12:00 "The Clinical Use of Histamine"—B. T. Horton, M.D., Mayo Clinic, Rochester, Minnesota.
- 2:00 p.m. "Intractable Pain in the Neck and Upper Extremity with Particular Reference to Protrusion of the Cervical Disc"—Grafton Love, M.D., Mayo Clinic, Rochester, Minnesota.
- 3:00 p.m. "Cardiac Muscle in Coronary Disease"—Warner Sheldon, M.D., Associate Professor of Pathology, University of Pennsylvania, Philadelphia.
- 4:15 p.m. "Obstructive Lesions of the Respiratory Tract"—Waldo E. Nelson, M.D., Professor of Pediatrics, Temple University Hospital, Philadelphia.
- 8:00 p.m. Panel Discussion on "Headache"—E. Charles Kunkle, M.D., Assistant Professor of Medicine (Neurology) Duke University Hospital, Durham; Bayard T. Horton, M.D., Mayo Clinic, Rochester, Minnesota; Grafton Love, M.D., Mayo Clinic, Rochester, Minnesota; Harry Schenck, M.D., Associate Professor of Otolaryngology, University of Pennsylvania, Philadelphia; Barton R. Young, M.D., Associate Professor of Radiology, Temple University Hospital, Philadelphia; Frank B. Walsh, M.D., Associate Professor of Ophthalmology, Johns Hopkins Hospital, Baltimore.

#### Thursday, February 15

- 9:30 a.m. Panel Discussion on "Respiratory Infections"—Perrin Long, M.D., Moderator, Professor of Medicine, Johns Hopkins Hospital, Baltimore; Harry Schenck, M.D., Associate Professor of Otolaryngology, University of Pennsylvania, Philadelphia; J. Warrick Thomas, M.D., Associate Professor of Medicine, Medical College of Virginia, Richmond; Waldo E. Nelson, M.D., Professor of Pediatrics, Temple University Hospital, Philadelphia; Barton R. Young, M.D., Associate Professor of Radiology, Temple University Hospital, Philadelphia.
- 12:00 Frank B. Walsh, M.D., Associate Professor of Ophthalmology, Johns Hopkins Hospital, Baltimore.

- 2:00 p.m. "Allergic Problems Demanding Prompt Treatment"—J. Warrick Thomas, M.D., Associate Professor of Medicine, Medical College of Virginia, Richmond.
- 3:00 p.m. "The Clinical Use of Antibiotics"—Perrin Long, M.D., Professor of Medicine, Johns Hopkins Hospital, Baltimore.
- 4:00 p.m. "The Rhinologic Management of Allergy of the Upper Respiratory Tract"—Harry Schenck, M.D., Associate Professor of Otolaryngology, University of Pennsylvania, Philadelphia.

### NEWS NOTES FROM THE UNIVERSITY OF NORTH CAROLINA SCHOOL OF MEDICINE

A postgraduate medical course sponsored by the University School of Medicine and the Extension Division has been arranged at Raleigh beginning January 18 with the Wake County Medical Society as co-sponsor. The program is as follows:

#### January 18

- 4:00 p.m. "Early Diagnosis of Cancer in the Female Genital Tract"
- 8:00 p.m. "Methods of Treatment"  
Dr. Houston Everett, Johns Hopkins University, Baltimore, Maryland

#### January 25

- 4:00 p.m. (Topic to be announced)
- 8:00 p.m. (Topic to be announced)  
Dr. Charles F. McKhann, Western Reserve University School of Medicine, Cleveland, Ohio

#### February 1

- 4:00 p.m. "Dysuria"
- 8:00 p.m. "Urinary Tract Infection"  
Dr. Theodore R. Fetter, Philadelphia

#### February 8

- 4:00 p.m. "Progress Made in Rehabilitation of the Deaf During the Last 15 Years"
- 8:00 p.m. A further discussion of "Progress Made in Rehabilitation of the Deaf During the Last 15 Years"  
Dr. Julius Lempert, New York, New York

#### February 15

No Meeting—Week of Watts Symposium

#### February 22

- 4:00 p.m. "Carcinoma of the Stomach"
- 8:00 p.m. "Acute Pancreatitis"  
Dr. Alton Ochsner, Tulane University of Louisiana, New Orleans, Louisiana

#### March 1

- 4:00 p.m. "Hypersplenism"
- 8:00 p.m. "The Treatment of Anemia"  
Dr. William Dameshek, New England Center Hospital, Boston, Massachusetts

#### Afternoon Sessions

4:00 p.m.—Nurses' Home, Rex Hospital

#### Dinners

7:00 p.m.—The New Carolina Country Club

#### Evening Sessions

8:00 p.m.—The New Carolina Country Club

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Dr. Robert H. Wagner has joined the staff of the Department of Pathology as research associate; Dr. Wagner received his graduate training at the University of Cincinnati; until recently he held a fellowship in biological chemistry at the Children's Hospital in Cincinnati.

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A grant of \$6,793 has been made to Dr. Thomas C. Butler, professor of pharmacology, by the U. S. Public Health Service to investigate quantitatively the metabolic fate of N-methyl derivatives of barbituric acid, in particular some of the compounds in current use as antiepileptic agents, with the aim to contribute to the theoretical knowledge of the chemical structures required for antiepileptic activity as well as to clarify the question of the rightful place of these drugs in therapeutics.

### REGIONAL MEETING OF THE AMERICAN COLLEGE OF PHYSICIANS

The Ninth Annual Regional Meeting of the American College of Physicians for the State of North Carolina was held on December 8, 1950, at the University of North Carolina School of Medicine. Dr. William deB. MacNider, distinguished and beloved early member of the College from North Carolina, was the honored guest; and Dr. William S. Middleton, dean and professor of medicine at the University of Wisconsin Medical School, was the speaker of the day at a banquet held at the Carolina Inn. The following scientific program was presented at the afternoon session:

"Mechanism of the Production of Ascites in Cirrhosis of the Liver."—Jack D. Myers, M.D. (Associate), Durham.

"ACTH and Cortisone."—Frank Engel, M.D., (by invitation); Theodore B. Schwartz, M.D. (by invitation), Durham.

"Temporal Arteritis."—Monroe T. Gilmour, M.D., F.A.C.P.; Horace H. Hodges, M.D., F.A.C.P.; and Paul Kimmelstiel, M.D. (by invitation), Charlotte.

Clinicopathologic Conference.—John B. Graham, M.D. (by invitation), Department of Pathology, University of North Carolina School of Medicine, Chapel Hill; Kenneth D. Weeks, M.D., F.A.C.P., Rocky Mount.

"Triethylene Melamine Therapy in Leukemia and Malignant Lymphoma."—Wayne Rundles, M.D. (Associate), Durham.

"The Value of Quantitative Studies (Skin Temperatures and Na<sup>24</sup> Clearances) of the Peripheral Circulation in the Evaluation, Diagnosis and Treatment of Peripheral Vascular Diseases."—Harold D. Green, M.D., F.A.C.P., Winston-Salem.

"Monilial Infections Complicating the Therapeutic Use of Antibiotics."—James W. Woods, Jr., M.D. (Associate); Isaac H. Manning, Jr., M.D., F.A.C.P.; Carl N. Patterson, M.D. (by invitation), Durham.

### NEWS NOTES FROM THE DUKE UNIVERSITY SCHOOL OF MEDICINE

#### Duke Pediatrician Joins Ochsner, Tulane Medical Staffs

Dr. Roger B. Bost, Duke Hospital pediatrician and member of the Duke Medical School faculty, joined the staff of Ochsner Clinic in New Orleans and the senior pediatric faculty of Tulane University Medical School on January 1.

The son of Mr. and Mrs. R. B. Bost of Clarks-ville, Arkansas, Dr. Bost attended the University of Arkansas at Fayetteville from 1939 to 1942. He received his M.D. degree from the University of Arkansas Medical School at Little Rock in 1945.

He interned at Santa Rosa Hospital in San Antonio, Texas, in 1946, and served in the U. S. Navy Medical Corp until 1948, when he joined the Duke Hospital resident staff. This year he has been a member of the medical school faculty in pediatrics.

### FIFTH DISTRICT MEDICAL SOCIETY

The Scotland County Medical Society was host to the Fifth District Medical Society in Laurinburg on December 14, 1950. The following scientific program was presented:

"The Practical Aspects of Cortisone Therapy," Dr. Roger Jackson of Fayetteville; "Comments on Infectious Disease in Children," Dr. Arthur London of Durham; "Anticoagulant Therapy in General Practice," Dr. Lucille Hutaff of Winston-Salem; "Diseases of the Pancreas," Dr. Wingate Johnson of Winston-Salem.

### DAVIDSON COUNTY MEDICAL SOCIETY

Dr. J. R. Terry, who for a number of years has served as secretary and treasurer of the Davidson County Medical Society, was elevated to the presidency at the annual meeting of the group on December 7. Dr. R. G. Jennings of Thomasville was elected vice president, and Dr. M. W. Phillips of Thomasville was named secretary-treasurer.

Named as delegates to the annual state meeting at Pinehurst in May were Dr. Terry and the retiring president, Dr. R. L. McDonald of Thomasville.

Mayor J. A. Smith of Lexington, who retired several years ago from the active practice of medicine, was a special guest, and made an informal talk to his fellow physicians.

### FORSYTH COUNTY MEDICAL SOCIETY

Dr. Ovar Swenson of Children's Medical Center, Boston, Massachusetts, was guest speaker at a dinner meeting of the Forsyth County Medical Society held in Winston-Salem on December 12, 1950. His subject was "Some Pediatric Aspects of Pediatric Surgery."

### NORTH CAROLINA LEAGUE FOR CRIPPLED CHILDREN

Three possible ways in which to prevent newborn children from being afflicted with cerebral palsy resulting from Rh factor incompatibility are suggested in an article by a noted cerebral palsy authority in the current issue of *The Crippled Child*, a publication of the National Society for Crippled Children and Adults, the Easter Seal agency.

Dr. Meyer A. Perlstein of Chicago, a counselor for the National Society and chief of the Children's Neurology Clinic at Chicago's Cook County Hospital, believes that the most effective way to prevent this crippling condition is through selective marriages of Rh negative women with Rh negative men.

Dr. Perlstein's article, "The Rh Factor—What it Means," outlines two other preventive methods. One is total blood transfusion for the child suffering from the effects of blood incompatibility; the other, still in an experimental stage and unproven, is the use of injections of protective substances to prevent antibodies in the pregnant woman's blood from damaging the child.

The article discusses the meaning of the term "Rh negative and Rh positive," and tells briefly what happens when incompatibility is present. It states that only one in twenty-five children born to Rh negative mothers will develop the condition known as erythroblastosis fetalis, and that of those who do, only one in five will develop cerebral palsy.

Prevention is emphasized as the most important way to meet the problem of cerebral palsy from

this cause. "The most effective method of preventing sequelae (consequences) is before pregnancy," he says. "To this end, if a woman is aware of her blood type and her husband's blood type, she may plan accordingly with respect to child-bearing."

### TRI-STATE MEDICAL ASSOCIATION

The Fifty-Second Annual Meeting of the Tri-State Medical Association of the Carolinas and Virginia will be held in Columbia, South Carolina, on February 19 and 20. Headquarters will be the Columbia Hotel. Those expecting to attend are urged to make reservations or write Dr. W. C. Cantey of Columbia, who will take care of arrangements for them. Dr. R. B. Davis of Greensboro, North Carolina, is president of the Association.

### MISSISSIPPI VALLEY MEDICAL SOCIETY

The Eleventh Annual Essay Contest of the Mississippi Valley Medical Society will be held in 1951. The Society will offer a cash prize of \$100.00, a gold medal, and a certificate of award for the best unpublished essay on any subject of general medical interest (including medical economics and education) and practical value to the general practitioner of medicine. Certificates of merit may also be granted to the physicians whose essays are rated second and third best. Contestants must be members of the American Medical Association who are residents and citizens of the United States. The winner will be invited to present his contribution before the Sixteenth Annual Meeting of the Mississippi Valley Medical Society to be held in Peoria, Illinois, September 19, 20, and 21, 1951, the Society reserving the exclusive right to publish first the essay in its official publication—the MISSISSIPPI VALLEY MEDICAL JOURNAL (incorporating the RADIOLOGIC REVIEW). All contributions shall be typewritten in English in manuscript form, submitted in five copies, not to exceed 5000 words, and must be received not later than May 1, 1951. The winning essays in the 1950 contest appear in the January 1951 issue of the MISSISSIPPI VALLEY MEDICAL JOURNAL (Quincy, Illinois).

Further details may be secured from  
Harold Swanberg, M.D., Secretary,  
Mississippi Valley Medical Society,  
209-224 W. C. U. Building, Quincy, Illinois.

### AMERICAN MEDICAL ASSOCIATION

Responding to the challenge voiced by its president, Dr. Elmer L. Henderson of Louisville, Kentucky, in his recent address to the House of Delegates, that the medical profession take the initiative in raising private funds for hard pressed medical schools, rather than seeking federal subsidies for medical education, the American Medical Association recently appropriated a half million dollars as the nucleus of a fund to be raised for the aid of medical schools throughout the nation.

The half million dollar contribution was voted unanimously by the A. M. A. board of trustees, and was announced by its chairman, Dr. Louis H. Bauer of Hempstead, New York.

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For the first time American medicine nationally has accepted the problems of alcoholism as a responsibility.

The House of Delegates, the policy-making body of the American Medical Association, has passed a resolution referring the subject to its Committee on Chronic Diseases. This committee is headed by Dr. Robertson Ward of San Francisco.

### NATIONAL FOUNDATION FOR INFANTILE PARALYSIS

Universities and research centers in sixteen states and Canada have been granted one and a half million dollars in March of Dimes funds for infantile paralysis research and professional education, Basil O'Connor, president of The National Foundation for Infantile Paralysis, announced recently. Among the institutions receiving grants was Duke University, which was allotted \$17,000 for research, under the direction of Dr. J. E. Markee, professor of anatomy.

The newly approved research projects include continuing attempts to develop an effective vaccine for polio, search for a chemical agent that will prevent the virus from damaging nerve cells, development of a rapid diagnostic polio test, and the preparation of a polio anti-serum that will increase an individual's resistance to paralysis.

\* \* \*

The National Foundation for Infantile Paralysis has announced the availability of a limited number of predoctoral and postdoctoral fellowships to candidates whose interests are research and teaching in the fields related to the problems of poliomyelitis, such as virology, biochemistry, biophysics, orthopedics, pediatrics, neurology and epidemiology.

Complete information concerning qualifications and applications may be obtained from: Division of Professional Education, National Foundation for Infantile Paralysis, 120 Broadway, New York 5, New York.

### NATIONAL SOCIETY FOR CRIPPLED CHILDREN AND ADULTS, INC.

A special four-week training course for employment and placement counselors working with cerebral palsied and other severely handicapped workers will be held March 12 through April 6 in New York, according to Lawrence J. Linck, executive director of the National Society for Crippled Children and Adults.

The program will be given at the Institute of Rehabilitation and Physical Medicine of the New York University-Bellevue Medical Center under the auspices of the school of education of New York University.

Persons wishing to receive a fellowship must make formal application by January 26, 1951. Applications and further information may be obtained from the National Personnel Registry and Employment Service of the National Society for Crippled Children and Adults, 11 South LaSalle Street, Chicago 3, Illinois.

### NATIONAL CONFERENCE ON MEDICAL SERVICES

The Twenty-Fourth Annual Meeting of the National Conference on Medical Services will be held Sunday, February 11, 1951, in the Red Lacquer room of the Palmer House in Chicago. The meeting is of special importance to presidents, secretaries, and public relations personnel of state and county medical societies.

(BULLETIN BOARD CONTINUED ON PAGE 10)



## AUXILIARY

### MESSAGE FROM THE PRESIDENT

Greetings for the New Year! We have mingled feelings as we start this new year. For some it may seem hard to find the happiness we would wish for them. Let's keep in mind what Gladys Taber said: "Looking back over the year is like sorting out treasures. How many good moments life gives us!" With the ideals of our Auxiliary and the desire for service, we shall be able to look back upon many treasures as the time passes. "The great use of life is to spend it for something which outlasts it."—William James.

Our responsibilities will grow daily, and our fields of endeavor may sometimes seem so great that the prospect almost overwhelms us; but let us keep in mind these wonderful words of Gladys Taber: "The world is filled with conflict; we have inherited a heavy burden in our day. But we also inherit the poetry and music and the faith in God and a belief in the common goodness of mankind."

So, again I say to you "Greetings!" May you find much satisfaction and happiness in service during this new year of opportunities.

MRS. HARRY JOHNSON  
Elkin

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### DOCTORS' DAY

March 30 is Doctors' Day. Its object is to honor the medical profession and pay tribute to the doctors. This particular day was selected in commemoration of March 30, 1842, when Dr. Crawford Long successfully used the first anesthesia.

I want to urge each auxiliary to plan a definite program for Doctors' Day on, or as near, March 30 as possible. The observance of Doctors' Day should be planned with due regard to the size of the participating group, and the interest of the doctors in that community. In counties where there is no active auxiliary, perhaps a group of wives could get together and map out some plan for their husbands' enjoyment.

There are numerous ways of celebrating Doctors' Day. In past years some units have shown a preference for dinner dances, dinners followed by games, or covered dish suppers. Other auxiliaries prefer sending flowers to each doctor's office, or providing a red

carnation for each doctor to wear in his lapel on March 30, with suitable publicity concerning the wearing of the flowers. The important thing is to see that no doctor is forgotten or overlooked.

In the event that it is impossible for an auxiliary to have a celebration, there remains the opportunity to secure some good publicity concerning the day, the progress of medical science, and the value of our doctors to humanity. In St. Louis, at the meeting of the Southern Medical Association, North Carolina received honorable mention for Doctors' Day activities in 1950. This recognition should inspire us to make even better plans for 1951.

MRS. BEN H. KENDALL  
Doctors' Day Chairman

## BOOK REVIEWS

**Atlas of Human Anatomy.** By Barry J. Anson, Ph.D., of Northwestern University. 518 pages. Price, \$11.50. Philadelphia: W. B. Saunders Company, 1950.

This book contains 518 pages of pictorial representation of gross anatomy. Next to the dissection of a cadaver, it offers the most practical approach to human morphology. Drawings of serially prepared dissections are the fruition of years of painstaking work by the author and his associates. Of particular interest is the statistical presentation of the "normal" variations. This feature makes the book valuable to surgeons, who must know and recognize common variations—for example, the arterial supply to the colon. The book deals with the practical aspects of anatomy—aspects that daily confront the surgeon and physician, as well as the medical student.

**Principles of Internal Medicine.** By Tinsley R. Harrison, (Editor-in-Chief), Southwestern Medical College, with Paul B. Beeson, M.D., Emory University Medical School; William H. Resnik, M.D., Stamford, Conn.; George W. Thorn, M.D., Harvard University Medical School; M. M. Wintrobe, M.D., University of Utah Medical College; and 48 Contributing Authors. 1,590 pages, with illustrations. Price, \$12.00. Philadelphia: The Blakiston Company, 1950.

Dr. Harrison is an inspiring teacher, with the faculty of presenting material to his students in a fresh and original manner. In the preparation of this work he has organized a team of medical men—five editors and forty-eight contributors—who share his enthusiasm for teaching, and who have succeeded in producing a book on internal medicine which is refreshingly different. It is divided into seven parts, which are entitled as follows: "Cardinal Manifestations of Disease," "Physiologic Considerations," "Reactions to Stress and to Antigenic Substances," "Metabolic and Endocrine Disorders," "Disorders Due to Chemical and Physical Agents," "Diseases Due to Biologic Agents," and "Diseases of Organ Systems."

Although it may take the reader some little time to find his way around through this arrangement of subjects, he will be well rewarded for the effort required to become familiar with the volume. There is very little padding in the work, in spite of its huge size. (Incidentally, it would be easier to handle if thinner paper had been used, or if the material had been presented in two volumes instead of one.)

One disappointment to this reviewer was that one of the most important fields in the practice of medicine was given scant attention. Although the psychoneuroses constitute from one to two thirds of the average medical man's practice, only one section of four pages is devoted to the subject of "Personality—Normal Emotional Development," as compared with 127 pages about the cardiovascular system, plus fifty pages given to the electrocardiogram.

This book will make a place for itself as an up-to-date reference work for both internists and general practitioners, since most of the general practitioner's work is in the field of internal medicine. One may be pardoned for hoping that future editions will be made lighter and easier to handle.

**Progress Volume: Modern Developments in Therapeutics and Methods of Treatment.** To accompany **An Integrated Practice of Medicine.** By Harold Thomas Hyman, M.D. 734 pages. Price, \$10.00. Philadelphia: W. B. Saunders Company, 1950.

Volume V of Hyman's **Integrated Practice of Medicine** is entitled **Progress Volume: "Modern**

**Developments in Therapeutics and Methods of Treatment."** As the title indicates, it is devoted chiefly to a discussion of newer remedies and their application to disease. "Therapeutic agents" are discussed, and then "Clinical Syndromes." The treatment of various conditions is outlined clearly and often in logical steps: for example, "Immediate Care," "Continuing Care," and "Interval Treatment." Prophylaxis, when feasible, is discussed.

The author gives his own opinion as to treatment, and some of his dogmatic statements will be questioned by many practitioners. For example, his enthusiasm over the antihistaminic drugs is not warranted by the carefully controlled clinical trials to which they have been subjected. Many would not consider the "biannual immunization with influenza virus vaccine," as "Practical Management" of influenza virus infections, especially in view of another statement that there has been no serious epidemic of influenza "since widespread availability of newer anti-infective agents"—a period now covering several years.

It is a disappointment that nothing new is added to the out-of-date discussion of pancreatitis found in Volume II of the original work, and that still no mention is made of the rather common condition, metabolic cranioopathy. It is asking a great deal, however, of one man to cover the whole field of medical practice—and Dr. Hyman has done a good job in the original work and in this progress volume. Those who bought the original set will no doubt want to bring it up to date by adding this progress volume.

(BOOK REVIEWS CONTINUED ON PAGE 39)

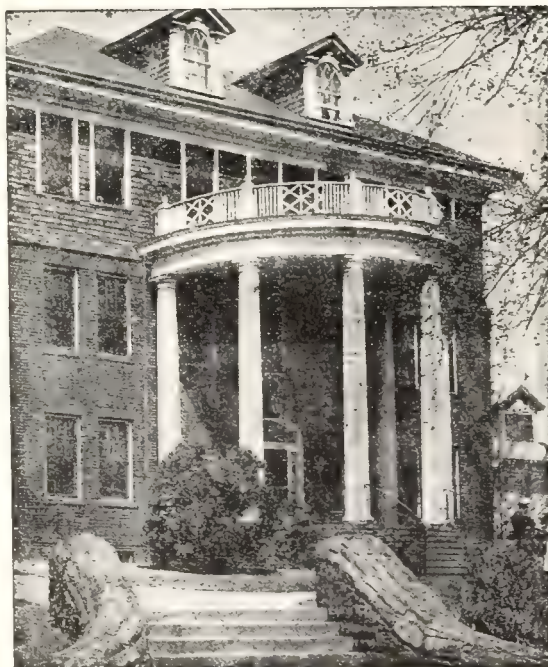
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**R. Charman Carroll, M.D.,** Diplomate in Psychiatry  
Medical Director

**Robt. L. Craig, M.D.,** Diplomate in Neurology and Psychiatry  
Associate Director



when "eating  
for two"  
... plenty of  
citrus fruits

Most obstetricians today insist that their mothers ingest plenty of vitamin C, particularly after the first trimester<sup>1</sup> (8 oz. citrus juice during pregnancy, 12 oz. while lactating).<sup>6</sup> Pregnancy is thus made safer because toxemia is thereby reduced.<sup>7</sup> Also, more babies are born normally and with a higher birth weight, while premature and still births are fewer.<sup>3,4</sup> In addition, both maternal and infant health is improved postpartum when an adequate vitamin C regimen has been followed throughout pregnancy.<sup>2</sup> Most mothers enjoy the flavor of fresh Florida citrus fruits (so rich in vitamin C and containing other nutrients\*), as well as the energy pick-up provided by their easily assimilable fruit sugars.<sup>5</sup>

\*Citrus fruits—among the richest known sources of vitamin C—also contain vitamins A and B, readily assimilable natural fruit sugars, and other factors, such as iron, calcium, citrates and citric acid.

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## BOOK REVIEWS

(CONTINUED FROM PAGE 36)

**Physician to the World.** The Life of General William C. Gorgas. By John M. Gibson, Director of the Division of Public Health Education, Alabama State Health Department. 315 pages. Price, \$4.50. Durham, North Carolina: Duke University Press, 1950.

In this book the author has succeeded admirably in presenting a vivid picture of one of the world's greatest men. From beginning to end Mr. Gibson maintains an excellent balance between Dr. Gorgas's scientific achievements and his lovable personal characteristics. Although his father, General Josiah Gorgas, was born in Pennsylvania and served as an officer in the United States Army prior to the Civil War, his mother was the daughter of an Alabama governor; so the father became Chief of Ordnance of the Confederate Army. Throughout his lifetime, General W. C. Gorgas remained a loyal Southerner.

The son sought to enter the Army by way of West Point. Since that door was closed to him, he studied medicine in order to get into the Army through the Medical Corps, graduating from Bellevue in 1879. After a year's internship in Bellevue Hospital, he entered the Medical Department of the Army in June, 1880—remaining in service until his retirement thirty-eight years later. He was then Surgeon General of the Army.

Soon after entering military service, he became interested in yellow fever, which was one of the great scourges of that day. While on duty in Texas

he contracted the disease himself, but recovered. During his convalescence he fell in love with another convalescent, Miss Marie Doughty, whom he married in 1884. The immunity acquired by him and his wife stood them in good stead when, in 1898, he was named sanitary officer of Havana. Following the pioneer work of Dr. Carlos Finlay, Walter Reed, and others, he succeeded in stamping out yellow fever by eradicating the *Stegomyia* mosquito—alias *Aedes aegypti*.

The reward for this achievement was the opportunity to render greater service in cleaning up Panama, thus making possible the construction of the Panama Canal. Here he had to contend against government bureaucracy at its worst. It is hard to conceive of such stupidity, arrogance, and indifference to human life as was displayed by the seven members of the Canal Commission—not one of whom was a doctor. A less patient and determined man would have given up in despair; but Gorgas stuck to his task doggedly, in spite of the discouraging odds, until a blistering report made by an unofficial messenger of the American Medical Association, followed by pressure in the right place, brought about a change of policy. Gorgas was given a freer hand in carrying out his sanitation measures, and yellow fever was banished from Panama as it had been from Havana.

The latter part of the story deals with the good work done by Dr. Gorgas in World War I, when he was Surgeon General of the Army, and with his triumphal march through Europe.

This book is one of the best pieces of scientific writing by a layman that has appeared in many a moon. It is as fascinating as a novel, and will be enjoyed by medical men and laymen alike.

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## BULLETIN BOARD

(CONTINUED FROM PAGE 34)

### AMERICAN COLLEGE OF ALLERGISTS

The American College of Allergists will hold its seventh annual meeting at the Edgewater Beach Hotel, Chicago, Illinois, February 12, 13, 14, 1951. Section meetings will be held on Psychosomatic Aspects of Allergic Diseases, under the leadership of Harold Abramson, M.D., of New York; Pediatrics, under Bret Ratner, M.D., of New York; Allergies of the Nose and Throat, under George Shambaugh, M.D., of Chicago; Allergic Diseases of the Skin, under Rudolph Baer, M.D., of New York City; and the Allergic Aspects of Rheumatism and Arthritis, under George Rockwell, M.D., of Cincinnati, as well as a general session of the College, when hay fever, asthma, and the newer drugs will be discussed under the leadership of John Mitchell, M.D., of Columbus, Ohio, the president of the College.

A fee of \$35.00 will be charged for the three day course lasting through February 9-10-11. For further information and registration write Fred Wittich, M.D., Secretary-Treasurer, American College of Allergists, LaSalle Medical Building, Minneapolis, Minnesota.

### AMERICAN COLLEGE OF RADIOLOGY

The American College of Radiology, a national association of physicians specializing in the application of x-ray, radium, and radioactive isotopes, has announced that it was instituting an intensive program of educating its 3,000 members throughout the country in the radiologic aspects of defense against atomic attack.

In announcing the program, Dr. C. Edgar Virden, Kansas City, Missouri, president of the College, said that "it is imperative that all radiologists understand the various aspects of civilian defense against an atomic attack."

On February 10, 1951, in Chicago, the College is sponsoring a national conference at which authorities on various phases of radiologic defense will inform the attending radiologists of latest developments and successful defense methods. This conference will serve as a model for local courses in radiologic defense throughout the nation.

\* \* \*

The American College of Radiology has instituted a course of instruction in Radiologic Defense underlining the responsibility of radiologists in atomic attacks, and it is suggested that state medical associations and county medical societies avail themselves of the services of local radiologists in the development of the local civil defense program.

### AMERICAN MEDICAL WRITERS' ASSOCIATION

The Eighth Annual Meeting of the American Medical Writers' Association will be held at the Pere Marquette Hotel, Peoria, Illinois, September 19, during the sixteenth annual meeting (September 19-21) of the Mississippi Valley Medical Society in that city. Beginning in January, 1951, the Association will publish a quarterly bulletin under the editorship of Dr. Lee D. Van Antwerp.

The Association will publish its 1951 membership booklet in February, and wishes to secure as members all physicians interested in any phase of medical writing. Any A.M.A. member who has published two or more articles, indexed by the Quarterly Cumulative Index Medicus, is eligible for membership. Further details may be secured from the Secretary, Harold Swanberg, M.D., 510 Maine Street, Quincy, Illinois.

## DEPARTMENT OF DEFENSE

### Secretary of Defense Announces Contract Agreement with American Red Cross on Expanded Blood Program

The Secretary of Defense, General Marshall, has announced that a contract has been signed between the Department of Defense and the American National Red Cross by which the Department of Defense, through the Armed Services Medical Procurement Agency, will provide financial assistance for the Red Cross to expand rapidly its facilities for furnishing blood to the Armed Forces.

The funds advanced by the Department of Defense are to be expended solely for the new plasma stock-piling program and for the collection and handling of whole blood for overseas shipments for the Armed Forces. None of these funds, it was emphasized, are in payment for the blood itself, which is contributed by volunteer donors, and no part of the funds will be used for the Red Cross civilian blood program. Red Cross accounting for all funds advanced by the Defense Department will be audited by finance officers of the Department of the Army.

## VETERANS ADMINISTRATION

Veterans of World War II who are planning GI Bill education and training were reminded by Veterans Administration recently that the July 25, 1951, final date for starting courses, is only seven months away. This coming spring school term will be the final such term most veterans may enter or re-enter before the deadline.

The 1951 deadline applies to most World War II veterans—those discharged from service before July 25, 1947. Those discharged after that date have four years from their discharge date in which to begin.

Veterans actually must have commenced their training by the cut-off date if they want to continue afterwards. A veteran must be in training on that date unless he has temporarily interrupted his course for summer vacation or for other reasons beyond his control.

Among the categories to which special consideration will be given are: (1) veterans who have started GI Bill studies and interrupted them to go back into active military or naval service; and (2) veterans who completed premedical and predental GI Bill schooling and are not able to get into a medical or dental school by deadline time.

Veterans who have taken GI Bill premedical or predental courses, but who have not yet gained admittance to medical or dental schools, will be permitted to start medical or dental training whenever an accredited school has room for them, even after the deadline. They must, however, establish the fact that they applied for admission each year after completing their GI Bill preliminary training. The special provision applies regardless of whether a veteran's premedical or predental studies end before or after July 25, 1951.

## FEDERAL SECURITY AGENCY

Dr. David E. Price has been appointed an Assistant Surgeon General of the Public Health Service and an Associate Director of the National Institutes of Health. The appointment was made by Dr. Leonard A. Scheele, Surgeon General of the Public Health Service.



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## RECENT ADVANCES IN THERAPY WITH ACTH AND CORTISONE

LYTT I. GARDNER, M.D.

BALTIMORE, MARYLAND

Although less than a year has elapsed since the publication of "Proceedings of the First Clinical ACTH Conference,"<sup>(1)</sup> recent advances<sup>(2)</sup> in the field of ACTH-cortisone therapy justify an additional progress note. During this interval particular interest has been shown in cortisone therapy, since this steroid is at last available in quantities sufficient for widespread clinical investigation. The costs of both cortisone and ACTH have decreased. Manufacturers have also begun to use beef pituitary glands in the production of ACTH (adrenocorticotrophic hormone). This review is concerned with what has recently been learned concerning the clinical action of ACTH and cortisone, with special reference to the latter.

### *Comparison of ACTH and Cortisone*

ACTH and cortisone were first used at almost the same time, and both have produced beneficial results in numerous diseases. The two agents differ greatly, however, in their mode of action in the body. ACTH is a protein (? peptide) hormone, and is produced by the anterior pituitary, while cortisone is a synthetic steroid, similar to the steroids of the adrenal cortex. The action of injected ACTH depends entirely upon the ability of the patient's own adrenal gland to respond. Cortisone, on the other hand, acts even in the absence of adrenal tissue.

Figure 1 (reprinted from Thorn, Forsham, and colleagues<sup>(2c)</sup>) demonstrates important differences in mechanism of action

between ACTH and cortisone. Table 1 compares ACTH and cortisone with respect to several of these factors.

How these two agents produce dramatic improvement in numerous diseases is still largely unknown, although information is accumulating rapidly. Sprague<sup>(3)</sup> recently summarized our present status as follows:

1. An important medical advance has been made in the observation that rheumatoid arthritis, acute rheumatic fever, and a variety of other conditions are rapidly reversible by these hormones.

2. The diseases which are favorably modified by cortisone and ACTH are not cured by them.

3. Cortisone and ACTH can induce a variety of therapeutic effects, both desirable and undesirable. One of the greatest problems at present is how to dissociate the undesirable effects from the beneficial effects.

### *Results of Experiments*

Histologically, the adrenal cortex is composed of three zones: an outer zona glomerulosa, a middle zona fasciculata, and an inner zona reticularis. Histochemical studies<sup>(4)</sup> suggest that the outer zone secretes desoxycorticosterone-like steroids, which regulate sodium and potassium balance, and that the middle zone secretes carbohydrate-regulating (cortisone-like) steroids. Other evidence<sup>(5)</sup> strongly implicates the inner zona reticularis in the production of adrenal androgenic steroids.

Experiments with animals have served to clarify somewhat the mode of action of administered cortisone. Rats injected with cortisone acetate over a period of forty-two days showed complete loss of lipoid and 17-ketosteroid-like material in the middle and inner zones of the adrenal cortex<sup>(6)</sup>. There was no

Read in part before the Section on the Practice of Medicine, Medical Society of the State of North Carolina, Pinehurst, May 2, 1950.

From the Department of Pediatrics, Johns Hopkins University Medical School, and the Johns Hopkins Hospital, Baltimore, Maryland.

Aided by grants from the American Cancer Society and from the United States Public Health Service.

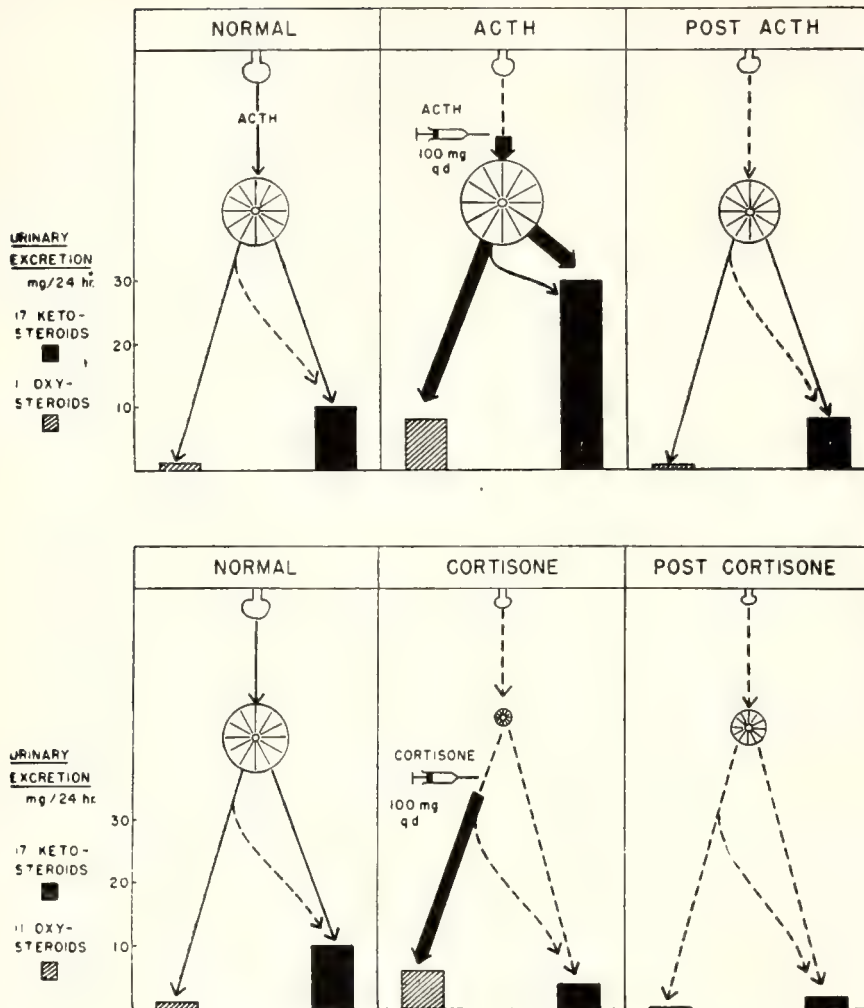


Fig. 1. Diagram showing the differential effects of ACTH (upper half) and cortisone (lower half) on pituitary and adrenal activity. Urinary 17-ketosteroids represents, in general, the end products of androgenic hormone metabolism; 11-oxysteroids, the end products of cortisone-like hormone metabolism. Note the opposite effects of ACTH and cortisone on the size and activity of the adrenal cortex. (Thorn and colleagues<sup>(2)</sup>. Reprinted by permission of The New England Journal of Medicine.)

apparent effect on the outer cortical zone (glomerulosa). When cortisone was discontinued, there was a histologic return to normal within seventeen days.

Since these changes are similar to those which occur with hypophysectomy in the rat, the hypothesis that cortisone blocks pituitary ACTH production has been tested<sup>(7)</sup>. This was done by administering cortisone to hypophysectomized rats maintained on injected ACTH. Adrenal atrophy did not occur, a result in support of the hypothesis. Cytologic evidence that the pituitary gland is affected by cortisone also exists, since changes similar to those described by Crooke have been observed recently in the pituitary cells of patients dying while under cortisone treatment<sup>(8)</sup>.

ACTH and cortisone may exercise their influence directly at the end organ. An important effect of these two agents is their

ability to interfere with hypersensitivity reactions. Both anaphylaxis and tuberculin reactions have been inhibited by these drugs<sup>(9)</sup>. Wound healing has been found to be delayed by cortisone<sup>(10)</sup>. Local application of cortisone appears to have a direct effect upon the cells of the epidermis, causing thinning, diminution of cell size, and slowing of hair growth<sup>(10)</sup>.

#### *Encouraging Clinical Results Congenital adrenal hyperplasia*

One of the most interesting and gratifying advances of the last few months has been the discovery that relatively small daily doses of cortisone reverse many of the features of pseudohermaphroditism due to congenital adrenal hyperplasia<sup>(11)</sup>. This disease, which is characterized by precocity and macrogenitosomia in males, and by precocity and pseudohermaphroditism in females, has not previously been amenable to surgical or medical



Table 1  
Comparison of Cortisone and ACTH

	Cortisone	ACTH
Chemical structure	A steroid (11-dehydro-17-hydroxy-corticosterone); molecular weight 360	A protein, although active portion may be a peptide; molecular weight 23,000
Source	Discovered in beef adrenal gland; now synthesized from bile acids	Prepared by fractionating proteins of anterior pituitaries of hogs or cattle
Available forms	1. Micro-crystalline saline suspension for injection 2. Tablets for oral use	Sterile powder, to be dissolved in saline and given by injection only
Effect on normal production of ACTH from pituitary glands	Suppresses endogenous ACTH (?)	Augments endogenous ACTH
Effect on normal adrenal gland	Suppresses adrenal function and produces temporary atrophy of adrenal cortex	Stimulates normal adrenal function, and causes temporary hyperplasia of adrenal cortex
Effect in Addison's disease	Improves carbohydrate defect; corrects water diuresis test (Kepler-Power)	None

therapy. Figure 2 presents data on such a case obtained by Wilkins and colleagues<sup>(11c)</sup>. The lowering of urinary 17-ketosteroids was followed by dramatic clinical feminization of a virilized girl, including the development of breast tissue and the beginning of normal menstrual periods.

A recent report indicates that cortisone may also be effective when given orally<sup>(12)</sup>. Unpublished observations by Wilkins and colleagues<sup>(11c)</sup> indicate that orally administered cortisone is effective in producing con-

siderable diminution of urinary 17-ketosteroids in congenital adrenal hyperplasia.

#### *Rheumatoid arthritis*

Further experience in the treatment of rheumatoid arthritis with ACTH and cortisone has accumulated<sup>(2)</sup>. Prior to August, 1950, the Mayo Clinic group had studied 23 patients with this disease who had been treated with ACTH or cortisone. Of these patients, 13 had received 90 to 95 per cent relief, 9 had received 75 to 90 per cent relief,

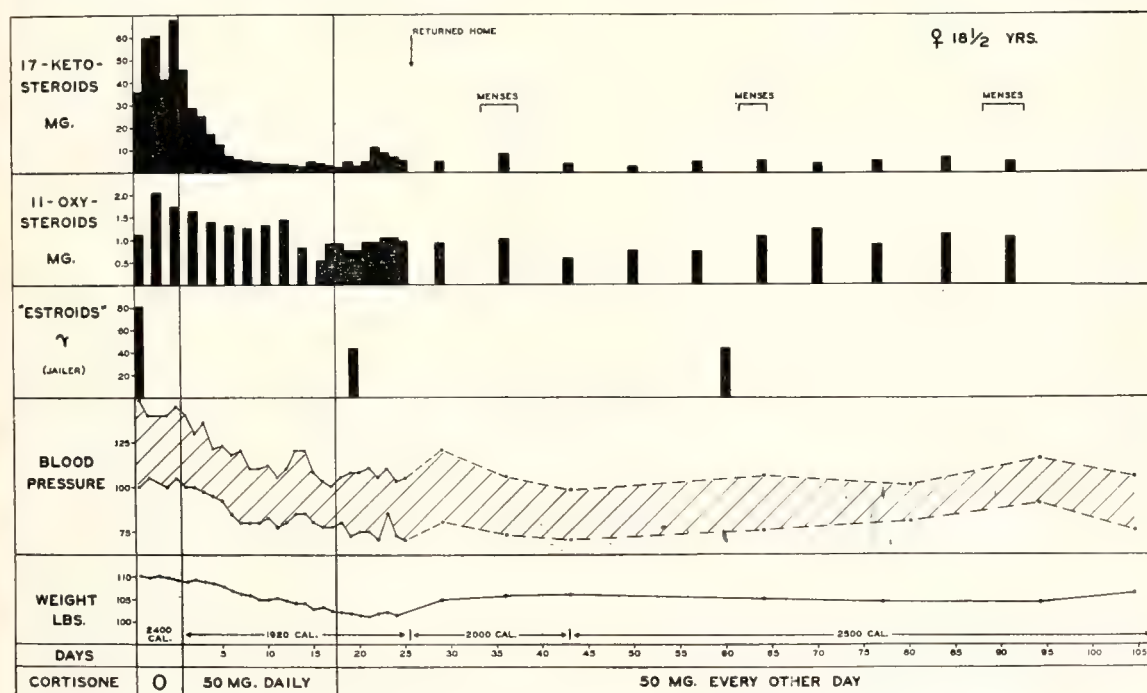


Fig. 2. Response of an 18½-year-old female pseudohermaphrodite to treatment with relatively small doses of cortisone. (Based on data of Wilkins and colleagues<sup>(11)</sup>.)

and one had received only moderate relief. When treatment was withdrawn, relapse ensued from five to fourteen months after the drug was stopped. Other investigators have reported similar results<sup>(13)</sup>. The dosage of cortisone acetate necessary to produce the foregoing results averaged about 100 mg. per day for adults.

#### *Acute rheumatic heart disease*

A number of patients with acute rheumatic heart disease have now been treated with cortisone or ACTH, and encouraging results have been obtained in some clinics<sup>(14)</sup>. Because of the chronic nature of the disease, it will be some time before it is known whether such treatment alters the course of rheumatic valvular damage. The dosage of ACTH for proper control (40 mg. per day) is relatively low compared with the required dosage of cortisone acetate (about 100 mg. per day). Thorn has suggested cortisone as the agent of choice in the treatment of rheumatic heart disease, because of the acute sodium-retaining effect of ACTH, and the subsequent danger of pulmonary edema<sup>(2)</sup>.

#### *Acute gouty arthritis*

Acute gouty arthritis has been shown to respond to small amounts of ACTH (50 mg. every six hours for two or three doses), and to recur in forty-eight to seventy-two hours, unless treatment with colchicine is also maintained<sup>(2)</sup>.

#### *Bronchial asthma and hay fever*

ACTH, administered in doses of 50 to 100 mg. per day for four to twenty-one days, has caused alleviation of symptoms of acute asthma, and has produced remissions lasting from four days to ten months<sup>(2,15)</sup>. Cortisone acetate, in doses of 100 to 200 mg. per day, has relieved ragweed, hay fever, and asthma<sup>(3)</sup>, but in general does not appear to be as effective as ACTH in improving bronchial asthma<sup>(15)</sup>.

#### *Drug hypersensitivity reactions*

Extensive studies have indicated the value of ACTH and cortisone in the study and treatment of hypersensitivity<sup>(1,15,16)</sup>. Favorable responses have recently been obtained by the use of ACTH in hypersensitivity reactions to iodine, sulfonamides, penicillin, atropine, and in a case of urticaria due to cold sensitivity<sup>(16)</sup>. Doses of 25 to 120 mg. of ACTH were used, averaging approximately 100 mg. per day. A patient with sensitivity

Table 2

#### Disease States in Which ACTH or Cortisone Therapy is Beneficial

- Adrenocortical dysfunctions (cortisone)
  1. Congenital adrenal hyperplasia
  2. Addison's disease
  3. Postoperative therapy of total or partial adrenalectomy
  4. Therapy of surgical patients having inadequate adrenocortical reserve
- Hypersensitivity syndromes
  1. Serum sickness
  2. Bronchial asthma (acute and chronic)
  3. Drug hypersensitivity reactions
  4. Exfoliative dermatitis
  5. Periarthritis nodosa
  6. Cranial arteritis
  7. Urticaria
  8. Vasomotor rhinitis
- Rheumatoid arthritis
- Acute rheumatic heart disease
- Loeffler's syndrome
- Acute gouty arthritis
- Idiopathic hypoglycemia
- Severe burns
- Lupus erythematosus (early cases)
- Ocular inflammations
  1. Non-granulomatous iritis
  2. Sympathetic ophthalmia
  3. Tuberculous uveitis
  4. Vernal conjunctivitis
  5. Herpes zoster ophthalmicus

to penicillin responded to 200 mg. of cortisone acetate given daily.

#### *Inflammatory eye disease*

Harvey and colleagues<sup>(17a)</sup> have reviewed the literature and have presented 13 cases of ocular inflammation that were treated beneficially with ACTH or cortisone. Cortisone instilled locally was found to be effective in diseases involving the anterior portion of the eye. A significant series of experiments by Woods and Wood<sup>(17b)</sup> demonstrated that in the eye parenterally administered cortisone and ACTH block the inflammatory reaction secondary to bacterial infection. These authors also found that cortisone injected directly into the anterior chamber blocked the inflammatory reaction to chemical irritants.

#### *Disseminated lupus erythematosus*

Carey and colleagues<sup>(18)</sup> have reviewed the literature, and have presented information on a number of cases of disseminated lupus erythematosus treated with ACTH and cortisone. The daily dosage of ACTH averaged 100 mg. Cortisone was begun with an initial dose of 200 to 400 mg., the amount being gradually reduced. The results were interpreted to be generally encouraging. Studies



Table 3

**Disease States in Which ACTH or Cortisone  
Therapy Has Been Disappointing**

Poliomyelitis	Hypertension
Progressive muscular atrophy	Diabetes mellitus
Sarcoidosis	Peptic ulcer
Myasthenia gravis	Fibrosis of the pancreas
Cancer	Multiple sclerosis
Leukemia	Pemphigus
Lymphoma	Mental disease
Liver disease	Paget's disease
Glomerular nephritis	Pernicious anemia

by Brunsting and colleagues<sup>(3)</sup> led to similar conclusions.

#### *Severe burns*

Preliminary observations on the successful use of ACTH in treating severe burns in adults<sup>(19)</sup> have been reported. Other studies on children<sup>(20)</sup> are in progress.

#### *Surgical cases*

The estimation of adrenal reserve in pre-operative surgical patients has been accomplished by the use of eosinophil response to ACTH<sup>(21)</sup>, and the surgical management of patients with inadequate adrenal cortical reserve is under investigation<sup>(22)</sup>. Edwards and colleagues at Duke have made an interesting contribution in using ACTH to treat unsuccessful skin grafts<sup>(23)</sup>.

#### *Other diseases*

Table 2 outlines those diseases in which ACTH or cortisone therapy has been found to be beneficial.

#### *Disappointing Clinical Results*

Table 3 lists a number of clinical states in which treatment with ACTH or cortisone has produced questionable or negative results (also see Thorn and others<sup>(24)</sup>). Unless there is a clear indication for treatment with these potent agents, prolonged administration to patients is ill advised. This point has been emphasized by Taylor and colleagues<sup>(24)</sup> in reviewing many cases of cancer treated with ACTH or cortisone.

#### *Undesirable Effects of ACTH and Cortisone Therapy*

The broad metabolic effects of ACTH and cortisone include both beneficial and detrimental changes. The undesirable features may become a complication of the prolonged administration of either drug<sup>(2)</sup>.

The most obvious change may be a gain in weight as a manifestation of edema, to-

gether with a slight to moderate increase in blood pressure. Signs of Cushing's disease (such as hirsutism, acne, hypokalemia, and hypochloremic alkalosis) may develop. Hyperglycemia with glycosuria and striae seem to occur less frequently. Further complications of ACTH-cortisone therapy may be delayed wound healing and psychiatric disturbances.

Prolonged administration of ACTH or cortisone produces a significant increase in blood cholesterol<sup>(25)</sup>. The occurrence of hypothyroidism in patients treated with these agents over a long period has been described<sup>(26)</sup>.

Abrupt withdrawal of either hormone may result in signs of hypoadrenocorticism, such as muscular weakness and the diminution of urinary 17-ketosteroids below pretreatment levels. It has been found beneficial to withdraw hormonal therapy gradually.

#### *Avoidance of Undesirable Effects*

If hormonal therapy is used with patients who have limited cardiac reserve or renal damage as in cases of acute rheumatic carditis or advanced lupus erythematosus, the development of edema and hypertension may be lessened by a low sodium diet. A daily chart of fluid intake-output and weight is valuable in predicting trouble.

If marked euphoria or mood-swings develop in a patient on hormonal therapy, one should be on guard for further psychiatric disturbances, and consider discontinuing treatment. Psychoses have developed in patients under treatment with these drugs.

Potassium depletion, which can be detected by finding low serum potassium and chloride and high serum carbon dioxide, may occur. Other possibilities are muscular weakness, and electrocardiographic lowering or inversion of T-waves and depression of the S-T segment. There is an excessive loss of both potassium and chloride in the urine. The administration of 2 to 4 Gm. of potassium chloride per day is advised for adults under these circumstances.

In the event that ACTH or cortisone is given to diabetic patients, it must be remembered that the insulin requirement may rise sharply on administration and fall on discontinuation of the hormone.

#### *Summary and Conclusions*

ACTH and cortisone appear to act on nearly all body cells. Both helpful and harm-

ful effects are produced. We may no longer conceive of these therapeutic agents as having a single, specific effect. As Ingle has so aptly stated, "The consequences of cortical hormone action spread through the organism in a manner reminiscent of the waves caused by the impact of a stone in a pool of water, but the point of impact of the hormone remains unknown for the present."<sup>(2)</sup>

Although the route of action of ACTH and cortisone is not yet clear, much is being learned about the optimal dosage and mode of administration, and about the avoidance of undesired effects. These agents are serving as valuable tools with which to study and treat certain diseases.

The author is indebted to Drs. Lawson Wilkins and John F. Crigler for helpful suggestions.

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### Abstract of Discussion

**Dr. J. Gilmer Mebane** (Rutherfordton): Are the other preparations which are recommended for use in conjunction with vitamin C effective at all?

**Dr. Gardner:** Some grave dangers are attached to treating patients with desoxycorticosterone. Irreversible changes can be produced by using that compound alone in excess. As to using vitamin C in conjunction with desoxycorticosterone, I don't think anybody has any sound information.

**Questioner** (not identified for reporter): I would like to know the value of a low sodium diet with ACTH.

**Dr. Gardner:** The restriction of sodium with ACTH is advisable. When severe hypertension or congestive heart failure is feared the patient is placed on a low sodium diet. That makes it difficult to interpret the results, since reduced sodium in itself influences the secretion of adrenal cortical hormones. When animals are placed on a low sodium diet, the outer region of the adrenal cortex begins to hypertrophy, so that any change made in dietary minerals also affects the secretion of these hormones.



THE EFFECT OF  
PARA-AMINO BENZOIC ACID (PABA)  
OR ITS SODIUM SALT ON THE  
ERYTHROCYTE SEDIMENTATION  
RATE IN VITRO

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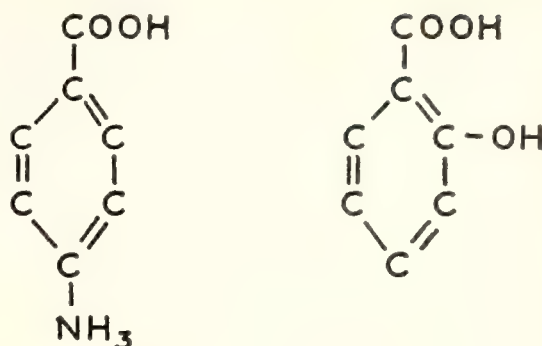
Dependable objective criteria are constantly being sought by which the improvement induced by drugs in the rheumatic patient can be measured. The laboratory determination most widely used in evaluating the clinical course of rheumatic states is the sedimentation rate. The salicylates are still the drugs most generally used in the treatment of these conditions. Rosenblum and Fraser<sup>(1)</sup> have reported that para-aminobenzoic acid (PABA) has a beneficial effect on the clinical symptoms of rheumatic fever. This drug has also been used in the treatment of other types of disease, such as rickettsial infections and lupus erythematosus.

The sedimentation rate is known to be affected by various drugs or by physicochemical factors acting *in vitro*<sup>(2)</sup>. The effect of the salicylates on the sedimentation rate *in vitro* and *in vivo* has been investigated<sup>(3)</sup>. It has been shown, for instance, that the sedimentation rate is definitely slowed if sodium salicylate is added to the blood *in vitro* and the mixture allowed to stand for twenty-four hours. Because of the similarity in chemical structure between salicylic acid and para-aminobenzoic acid (fig. 1), a series of experiments were performed to determine the effect of para-aminobenzoic acid or its sodium salt on the sedimentation rate *in vitro*.

#### Methods

Fourteen hospitalized patients on the wards of the North Carolina Baptist Hospital served as donors for the blood. The patients had various types of clinical conditions, but none had a history of any rheumatic disease. No patient had received either salicylates or para-aminobenzoic acid during his stay in the hospital. Some patients had normal sedimentation rates; in others the rate was increased.

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PARA AMINO  
BENZOIC ACID

SALICYLIC  
ACID

Fig. 1.

Blood drawn from 10 patients was placed in tubes containing dried potassium and ammonium oxalate as an anticoagulant<sup>(4)</sup>. The oxalated blood in carefully measured quantities was transferred at once to a series of seven vials containing dried para-aminobenzoic acid. The final dilution of PABA in the vials ranged from 10 to 70 mg. per 100 cc. by increments of 10 mg. An eighth vial which contained no PABA, but only oxalated blood, was used as a control. The vials were rotated by hand for three to five minutes in order to dissolve the drug. The blood from the vials was then immediately introduced into Wintrobe sedimentation tubes, and the rate of fall after one hour was recorded. The observed rate was corrected for anemia by the chart of Wintrobe and Landsberg<sup>(4)</sup>.

Since the sodium salt of para-aminobenzoic acid is used more frequently than para-aminobenzoic acid in treating patients, the experiment was repeated, using blood drawn from 4 patients. Duplicate tests were done on each sample of blood—one with PABA, the other with its sodium salt.

In order to check the calculated concentrations of the drug<sup>(5)</sup>, the quantity of PABA in an aliquot of the blood was determined chemically. Determinations made on all dilutions, in at least two sets of samples in each experiment, showed that the actual concentration of the drug was within 5 mg. per 100 cc. of the calculation.

#### Results

The corrected sedimentation rates recorded in experiment 1 (using PABA) are shown in

Table 1  
Corrected Sedimentation Rate of Blood (in Millimeters per Hour)  
after the Addition of PABA in Varying Concentrations.

Concentrations of PABA (in mg. per 100 cc.)	Patient Number										Statistical Calculations*	
	1	2	3	4	5	6	7	8	9	10	t	P
0	28	20	8	28	0	34	15	14	18	9		
10	28	20	6	24	8	26	16	11	18	11	.451	.7
20	28	20	7	24	8	32	14	9	21	11	.0	.0
30	26	18	6	28	6	32	14	8	23	10	.268	.8
40	28	16	5	25	8	25	13	7	21	11	.949	.4
50	26	18	5	24	0	32	14	6	20	7	2.65	.03
60	23	14	1	5	0	30	12	6	19	0	3.04	.015
70	24	12	1	18	0	26	12	3	12	3	6.06	<.01

The following formulae were applied:

$$t = \frac{-d}{s-d} \quad s-d = \sqrt{\frac{\sum d^2 - \frac{(\sum d)^2}{n}}{n(n-1)}}$$

A value for P of less than 0.02 was considered significant.

The results obtained with PABA in patients 11-14 were added to these data in order to increase the size of the sample, and the statistical significance was then recalculated. The values of P remained essentially the same.

Table 2  
Corrected Sedimentation Rate of Blood (in Millimeters per Hour) after  
the Addition of PABA or the Sodium Salt of PABA in Varying Concentrations

Concentration of PABA (in mg. per 100 cc.)	PABA Patient Number				Na PABA Patient Number				Statistical Calculations*	
	11	12	13	14	11	12	13	14	t	P
0	16	19	21	25	16	17	25	26		
10	17	21	25	26	16	24	23	22	.105	>.9
20	16	20	20	30	11	21	25	26	.136	.9
30	13	21	22	25	14	23	18	29	0	0
40	10	22	21	23	15	21	16	26	.554	.6
50	14	22	18	26	16	17	16	21	1.61	.2
60	17	14	16	24	10	16	0	23	1.59	.3
70	18	10	12	18	10	13	10	18	3.44	.03

\* The statistical calculations apply only to the values for Na PABA.

table 1. Though the figures reveal a tendency toward a slight decrease in the sedimentation rate as the drug levels become higher, statistical analysis fails to reveal any significant difference until a concentration of 60 mg. per 100 cc. is reached.

The results in experiment 2 (using PABA and sodium PABA) are shown in table 2. Statistical analysis reveals a significant change in the sedimentation rate only in the highest concentration—70 mg. per 100 cc.

#### Comment

No significant slowing of the sedimentation rate of blood was observed as a result of the addition *in vitro* of PABA or its sodium salt in concentrations achieved by administration of the usual therapeutic doses. When the drug is administered to a patient, it is

metabolized rapidly. It is possible that some metabolic product of PABA may be found subsequently to alter the sedimentation rate. The drug or a metabolic product may have some effect on the blood which would not be reflected in the sedimentation rate and which might account for the improvement in clinical symptoms.

Since PABA is rapidly metabolized and since most clinical determinations of the sedimentation rate are done soon after withdrawal of the blood, it was not felt necessary to repeat the experiment after allowing the mixture to stand for a period of hours.

Blood levels above 50 mg. per 100 cc. are rarely encountered in patients receiving PABA therapeutically. These concentrations are reached only with massive doses of the



drug or as a result of decreased urinary output. The slowing of the sedimentation rate observed at 60 to 70 mg. per 100 cc. was felt to be of no clinical significance.

### Summary

Neither para-aminobenzoic acid or its sodium salt, in concentrations as high as 50 mg. per 100 cc., significantly altered the sedimentation rate of blood *in vitro*.

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## TREATMENT OF ADVANCED STRICTURES OF THE RECTUM DUE TO LYMPHOGRANULOMA VENEREUM

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The problem of lymphogranuloma venereum with advanced rectal stricture is of great concern to two people—the miserable patient and the conscientious physician who tries to cure him.

### History, Etiology, and Complications

Larsen<sup>(1)</sup> in 1849 described an inflammatory stricture of the rectum in women which was apparently lymphogranuloma venereum. In 1864, a local excision of the anus for non-malignant stricture was reported by Glaser<sup>(2)</sup>. In this case a colostomy was necessary later because of a recurrence. Nicolas, Favre, and Durand<sup>(3)</sup> described and named the disease in 1913. In the French and Spanish literature, which contains many more cases than our own, lymphogranuloma venereum is generally referred to as Nicolas-Favre disease.

This condition, which is caused by a filterable virus<sup>(4)</sup>, is apparently responsible for the majority of non-malignant strictures of the rectum and colon. In both males and fe-

males the disease may begin as a mucosal infection (proctitis), presumably following pederasty<sup>(5)</sup>. The more common form, however, is the submucosal lymphatic infection which drains back from the vagina through the tissues around the vagina and rectum to the pararectal glands. This form, of course, occurs only in the female. Firm fibrous tissue replaces the normal elastic tissue in this region. Multiple small abscesses develop, burrowing in many directions and producing sinuses and fistulous openings into the rectum, vagina, and ischiorectal areas. Infection with a heterogeneous bacterial flora is superimposed.

In at least 24 cases of lymphogranuloma venereum, the development of superimposed carcinoma has been reported<sup>(1,6)</sup>. Taussig<sup>(7)</sup> and Smith<sup>(8)</sup> have stated that the Frei test is frequently positive in cases of vestibular or vulvar carcinoma. One patient in my own report (with this condition) later developed carcinoma of the cervix. Binkley and Derrick<sup>(9)</sup> tested 19 patients with *squamous* cell carcinoma of the rectum with Frei antigen. A positive reaction was obtained in 8 cases, and in 3 others anal signs strongly suggestive of pre-existing lymphogranuloma venereum were present.

### Review of Therapy

The French surgeons were the first to recognize the need for surgery in patients with far advanced strictures<sup>(10)</sup>. A local excision of the lesion similar to the old Whitehead operation has been performed in England. One of my patients had such a resection performed sixteen years before a radical operation finally produced a cure.

In 1933 Martin<sup>(11)</sup>, reporting 227 rectal strictures in Negro females, stated that the disease was incurable and eventually fatal. No definite method of treatment was suggested.

All agree that dilatations (a treatment honored only by time and wide usage) are only palliative, and the results have not been improved by combining this measure with radiation, diathermy, and various drugs. Dilatation is not without danger, and numerous cases of rupture of the bowel wall, some occurring intraperitoneally, are recorded. While cure by sulfonamide drugs has been reported in isolated cases, it is likely that in most cases only the secondary infection is influenced<sup>(12)</sup>.

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Barber and Murphy<sup>(6a)</sup> performed a preliminary colostomy, followed by an abdominoperineal or sacroperineal resection. In many cases where a colostomy alone has been performed, the granulomatous stricture-producing lesion has ascended to, involved, and passed the colostomy. Such a case is included in the series reported herewith.

Woods and Hanlon<sup>(13)</sup> reported a large series of cases treated by surgery. Colostomy alone was performed in 34 cases, and radical resections in 35. Twenty-three of these radical operations were combined adominoperineal resections, and good results were obtained in 20 of these cases. Nine were perineal resections of the Lockhart-Mummery type; results were good in 5 of these cases, fair in 2, and poor in 2. In this country the majority of patients have been treated with dilatation alone, or with colostomy when the patient refused more dilatation. The more radical definitive surgery has been employed only at such large centers as the Baltimore City Hospital<sup>(14)</sup>, Bellevue Hospital in New York<sup>(6a)</sup>, the Cincinnati General Hospital<sup>(12)</sup>, and the Harlem Hospital<sup>(1)</sup>. In the last institution, Wright and his co-workers<sup>(1)</sup> have followed the Pauchet technique of high colostomy, perineal resection and pull-through, and finally closure of the colostomy. Twenty-six operations of this type were performed, with an 8 per cent mortality. Among the 12 patients who were followed, 8 obtained satisfactory results.

In my own experience I have found that dilatation, drugs, and simple surgical procedures are palliative measures only. Radical surgery is the only method of treatment which has eradicated the disease.

#### *Analysis of One Hundred and Thirty-Nine Cases*

During the last ten years (1940 through 1949) 139 cases of lymphogranuloma venereum have been seen at three hospitals in Durham. I have analyzed these 139 cases, and found that only in my own cases has a radical operation been performed.

This series contained 133 females and 6 males. The 6 males were very carefully screened, and there was thought to be no question of the diagnosis. Only 3 were given a Frei test; 2 reactions were positive and the other was questionable. The average duration of symptoms before examination was four years.

#### *Symptoms*

The major symptom was pain on defecation; this was present in all patients. One hundred and four had noted the frequent passage of purulent material. Constipation was present in 92, bleeding in 71, and intermittent bouts of diarrhea in 21. Two complained of amenorrhea, which was attributed to marked anemia.

#### *Physical findings and blood counts*

Only those cases of lymphogranuloma venereum in which a stricture was present are included in this series. Forty-three patients were described as having hemorrhoids. In 41 cases these were specified as external hemorrhoids; the other 2 patients had both external and internal hemorrhoids. These should more properly be called "lymphorrhoids," as they consisted of large, thick, flat or pyramidal tags of edematous tissue. Greenblatt and Wermer<sup>(5)</sup> have shown that these are not true hemorrhoids, and the fact that only 2 patients were said to have internal hemorrhoids lends confirmation to this belief. Anal fistulas, usually multiple, were present in 23 cases. Eight patients had rectovaginal fistulas, one of which had developed during a delivery.

The average hemoglobin in this series was 63 per cent, and the lowest was 22 per cent. As is usual in chronic diseases, the leukocyte count was not markedly elevated, the average being 8,106.

#### *Methods and results of treatment*

Three patients refused treatment, and were not seen again. Thirty-six were referred elsewhere for treatment, either to their own physician for dilatation, or to another hospital. One had an ill-advised ileostomy as the result of a mistaken diagnosis of ulcerative colitis. The patient was in *extremis*, with a hemoglobin of 38 per cent, and died five days after operation. This was the only death in the series. In 2 cases an unsuccessful attempt was made to repair the recto-vaginal fistula without associated colostomy. This leaves 97 cases in which treatment was directed toward the major complaint—painful defecation and stricture, with or without associated lymphorrhoids, fistula, bleeding, or other complaints.

All patients had had some *dilatations* or attempts at dilatation. In 61 cases more than four dilatations were carried out. Prior to 1939, tartar emetic was injected once or twice weekly. Since 1939 various sulfona-



mides have been used in conjunction with dilatation. All types have been tried, the emphasis being on sulfaguanadine and sulfasuxidine.

Removal of associated lymphorrhoids was done 18 times, and 6 of these patients had subsequent additional therapy. Only 1 fair result was obtained from this procedure; results were poor in 15 cases, and two were lost to follow-up. Abscesses were incised and drained in 7 cases, and a poor result was obtained each time; 3 of these patients underwent further definite surgery. Of the 16 patients subjected to fistulectomy, one had a fair result, 13 had a poor result, and 2 were not followed. Six had additional surgery.

Of the 61 patients treated by four or more dilatations with or without these various adjuncts, none were cured; 7 had fair results, 40 had a poor result, and 14 disappeared while under treatment and were lost to follow-up. Two patients had to be admitted to the hospital as emergency cases—one with an intraperitoneal rupture of the colon, and the other with very severe, diffuse perineal infection due to rupture of the rectal segment below the peritoneal floor.

*Colostomy* was performed 21 times. Two of these patients are free of all troubles and 11 are improved (a fair result). The results were poor in 7 cases, and 1 patient was not followed. Six of the 7 patients who obtained poor results had additional surgery.

A *combined abdominoperineal resection* was done on 12 patients. In 2 this was the plan of treatment adopted on the first examination (after numerous dilatations had been performed elsewhere). In the other 10 patients this final definitive therapy was chosen because of continuation of severe anemia with bleeding, passage of purulent material, and pain following lesser procedures.

One patient died of another disease, but was apparently free of rectal symptoms. Eleven considered themselves well, with a healed perineum, a well functioning colostomy, and no anemia. They were all able to do their regular work.

Two patients had a *perineal or sacral resection*. One is well and the other has had a fair result, but requires occasional dilatation of the anus.

#### Case Reports

Two of the unusual cases in this series are reported below. They illustrate in detail the progressive stages of the disease.

#### Case 1

A 19 year old girl was first seen in 1933 with a stricture of the rectum beginning 2½ cm. above the anal margin, and extending upward 11 cm. The Frei test was positive. Her chief symptoms were pain in the abdomen, constipation, pain on defecation, ribbon stools, a pink, frothy discharge, marked anemia, and weight loss. The rectum would admit only a no. 12 catheter. After several months of treatment by dilatations, which were carried out with much pain, a tangential colostomy was performed.

She was not seen again until 1943, at which time she complained that the colostomy was closing up. An exploratory operation for intestinal obstruction had been performed, but none was found. One other operation was performed for fistula and peri-anal abscess.

Re-examination showed a tightly constricted colostomy opening 1 cm. in diameter, with an indurated, raised skin margin. The rectum was still draining purulent material, and would not admit a no. 14 rubber catheter. The hemoglobin was 46 per cent. It was felt that the patient had persistent active lymphogranuloma venereum of the rectal area, with a keloid-like stricture of the colostomy. An attempt was made to dilate the colostomy under anesthesia. Instead, it split longitudinally down the bowel, into the peritoneal cavity. Immediate exploration showed that the granulomatous process had advanced upward, passing the colostomy, to the splenic flexure. A complete transverse colostomy was performed through normal bowel wall. She recovered rapidly and was discharged.

Two months later she was readmitted, having gained 20 pounds in weight. A combined abdominoperineal resection of the left side of the colon and rectum was carried out. Complete healing took place in three weeks. The specimen removed was thick walled and friable, and the mucosa over more than one half of the surface up to the colostomy was absent. There were multiple small sinuses leading from the lumen to small abscesses in the wall of the bowel.

A letter received in April, 1950, stated that the patient was quite well. She had no anemia, and she had had a second pregnancy, with delivery by caesarean section in 1949.

#### Case 2

A colored woman, aged 31, was admitted to the hospital on October 27, 1943, with a complaint of constipation which had been gradually increasing since she had had a fistulectomy four years previously. Except for obesity, the only abnormal finding was a dense, fibrous stricture of the rectum beginning 1½ cm. above the anal margin. The rectum admitted only a no. 2 French catheter. Following gradual dilatation, a no. 5 bougie could be passed. The stricture was found to extend upward 5 cm., above which level the mucosa appeared normal. Kahn and Kline tests were negative, but the Frei test was positive.

Since it was felt that this lesion could be completely extirpated by perineal excision, an unusual procedure was carried out. With the patient in the prone position, the anus was draped out of the field, and a clean incision extending from 1½ cm. above the anus to the coccyx was made in the midline posteriorly. Dissecting along tissue planes, the rectum was mobilized well up into the hollow of the sacrum until a long, redundant loop including the lesion was available. This incision was closed and dressed. A circular incision was then made around the anal edge, and the free space was quickly entered. The loose bowel was withdrawn, and several sutures were used to approximate the subcutaneous tissue and muscle fibers to the bowel wall 6½ cm. above the anus. A 6 cm. section was cut away, and the mucosa was sutured loosely to the skin.

Convalescence was rapid and uneventful. The patient was discharged after thirteen days, with a well functioning anus. There was a little rough granulation tissue at the suture line, which disappeared in about six weeks. She was entirely well six years later.

The specimen removed showed a **complete loss** of rectal mucosa over most of the surface. The tissue was thick and fibrous, and many small sinuses were present.

### Conclusions

When a definite stricture has formed in lymphogranuloma venereum, complete resolution never occurs. In some instances careful attention to the elimination of secondary infection, correction of minor surgical complications, and regular dilatations produce a fair result, so that the patient is able to carry out a normal daily routine. In 9 out of 10 patients, however, such a happy result is not obtained. Diversion of the fecal current and removal of the diseased tissue will produce a cure or marked improvement in these patients.

From the literature reviewed and the data gathered here, one may conclude that:

1. Dilatations are never curative.
2. The firm, fibrous tissue strictures never disappear.
3. Mucosa destroyed over large areas never regenerates.
4. Colostomy does not always arrest the disease.
5. Abdomino-perineal resection is a satisfactory method of treating this condition.

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### Abstract of Discussion

**Dr. Donnell Cobb (Goldsboro):** My experience with this condition has been similar to that which Dr. Schiebel reported in the majority of this series. All of my patients have been Negro women, and the treatment has consisted of tartar emetic, sulfonamides, antibiotics, and minor surgical procedures to drain the abscess and fistula. None of the patients have shown much improvement.

I think that Dr. Schiebel has described the only definite means that we have at our disposal for curing these patients. After hearing his excellent presentation, I am sure that I will be able to treat these people more intelligently in the future.

**Dr. William Hollister (Pinehurst):** While my experience with the surgical treatment of this condition has been very limited, I have had the opportunity to follow some of Dr. Schiebel's cases, and I thoroughly concur in his belief that the combined abdominal-perineal resection is the proper method of treatment.

I think Dr. Schiebel is to be commended for being bold enough to go ahead with this type of procedure. He assures me that the technical difficulties of the operation do not preclude a fairly easy surgical removal of the lower segment of the bowel.

I would like to reiterate what Dr. Schiebel has already said about the possibility of superimposed malignancy in these chronic granulomatous lesions. We all know that carcinomas do develop in the tuberculous lung, and those of us who do thoracic surgery are always on the lookout for this complication in a tuberculous lesion. Dr. Schiebel might be considered, at least in North Carolina, a pioneer in this form of surgical therapy for rectal stricture due to lymphogranuloma venereum.

**Loss of weight with diarrhea.**—It is a mistake to imagine that, because a patient who has diarrhea has not lost weight, he therefore cannot have a neoplasm in the colon. It should be our aim to diagnose these cases early and hand them over to the surgeon before they have become cachectic. It is true that, when a patient with chronic diarrhoea asserts that he has not lost weight, one is usually justified in concluding that the cause is functional, but there is no reason to suppose that psycho-neurotic patients are immune from organic diseases such as cancer. —W. Lindsay Lamb: *The Investigation of Chronic Diarrhoea in Adults*, *Edinburgh M. J.* 55:206 (April) 1948.

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## RECENT ADVANCES IN THE DIAGNOSIS AND TREATMENT OF EPILEPSY

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and

MARVIN J. ROSENBLUM, M.D.

WINSTON-SALEM

Experience of a number of clinics for the treatment of convulsive disorders has shown that patients suffering from this type of disease are not receiving the maximum benefits from medical therapy now available.

To determine the improvement which can be achieved with medical treatment, we have summarized our results in a series of 45 patients selected at random (fig. 1). Under therapy, the number of patients having one attack or less every six months was increased from 3 to 27. In other patients, less dramatic amelioration of the frequency and severity of epileptic seizures was obtained.

Similar results were reported recently from a clinic in Birmingham<sup>(1)</sup>. Patients who had never received any treatment averaged eighteen seizures per month. Patients who had had treatment of one sort or another prior to reporting to the clinic averaged fourteen seizures per month. Following treatment in the clinic, the frequency of seizures in the average case was reduced to two per month. Only 15 per cent of the patients were capable of working prior to treatment, while 45 per cent were doing at least part time work under the therapy provided by that group.

Read before the Section on Public Health and Education, Medical Society of the State of North Carolina, Pinehurst, May 3, 1950.

From the Department of Neurology, Bowman Gray School of Medicine of Wake Forest College, Winston-Salem, North Carolina.

Except for the electroencephalograph, which does, to a certain extent, make diagnosis and treatment more effective, no method was used in the treatment of the patients in the Birmingham clinic or in our clinic in Winston-Salem that is not generally available. However, since these clinics were able to bring about such striking improvements, it is evident that the patients' previous treatment must have been inadequate. There are probably three reasons to account for the fact that many epileptics have not been receiving the maximum benefit of medical therapy—ignorance on the part of the public, wrong diagnosis, and inadequate knowledge of the newer medications.

### *The Need for Education of the Public*

One important factor is the ignorance of the general population about the nature and treatment of epilepsy. There is still a great tendency to look on epilepsy as a disgrace, to feel that little can be accomplished by treatment, and to keep the disease hidden as much as possible. We recently examined a patient in our clinic who had been suffering from convulsions for twenty years, but had never previously sought medical attention. Epilepsy, we feel, is a public health problem which deserves far more publicity and a far more vigorous educational campaign than has previously been provided.

### *The Diagnosis of Bizarre Forms of Epilepsy*

The second important factor contributing to the inadequacy of treatment is misdiagnosis. Among the patients whom we have been able to help most is a group suffering from disease of the temporal lobe, whose automatisms and psychic equivalents are mistaken for hysteria or anxiety symptoms.

We have summarized the subjective com-

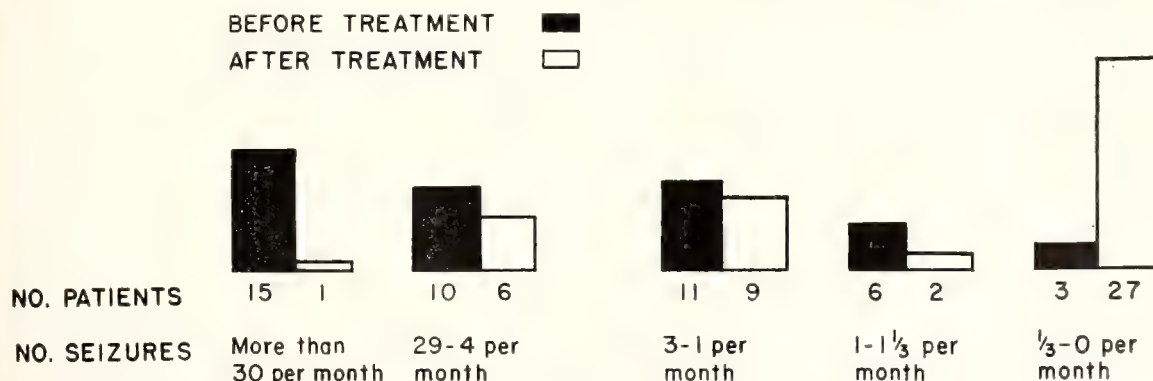


Fig. 1. Results of treatment in 45 unselected cases.

Table 1

Subjective Symptoms of 100 Patients With Lesions in the Temporal Lobe as Demonstrated by the Electroencephalogram

Symptoms	Incidence
Headache .....	15%
Funny feeling all over .....	11%
Numbness of hands .....	10%
Numbness of lips .....	17%
Choking or throat sensation .....	17%
Disturbances of taste .....	12%
Chest pain or dyspnea .....	12%
Palpitation .....	6%
Nausea or abdominal discomfort .....	28%
Dread .....	12%
Indescribable feeling .....	10%
Faintness or dizziness .....	27%
Deja vu phenomenon .....	4%
Recollection .....	3%
Forced thinking .....	3%
Dream state .....	12%
Disturbances of vision .....	9%
Strange appearance of surroundings .....	10%
Aphasia .....	15%
Auditory disturbance .....	1%
Olfactory disturbance .....	1%

plaints of 100 patients whom we have studied and who were complaining of symptoms referable to the temporal lobe. In each instance the presence of disease in this area was confirmed by electroencephalograms, by operation, or by both (table 1). Sometimes such symptoms occurred as the aura of an attack, and sometimes as minor seizures which were not followed by a convulsion. In a few instances, minor seizures of a purely subjective character preceded by many years the occurrence of any convulsion, and several patients who had never had a true convulsive seizure were observed. It is among these patients whose symptoms are purely subjective that diagnosis is most difficult, since the possibility of epilepsy is more likely to be considered when the patient has actually had a convulsion.

#### Classification of symptoms

The types of symptoms listed in table 1 may be summarized under four headings: The first group consists of *visceral sensations*, including most commonly a peculiar quivering. A numb feeling may start in the pit of the stomach and rise slowly up to the sternum and throat. A sensation of choking or swelling of the tongue is quite common, and numbness of the hands and lips is also observed. Both hands are often involved, even though the electroencephalographic evidence may be lateralized. Those patients with a sensation of choking may be thought to have globus hystericus, and those with the numbness or tingling are often classified as cases of the hyperventilation syndrome.

Included in the second group of symptoms are *changes in the patient's relationship to his surroundings*, such as a bizarre feeling of a change in the appearance of nearby objects, a sense that they are receding or approaching, or simply a complaint that things look strange.

The third group has to do with *memory and recall*. In this category are included dream states, the well known *deja vu* phenomenon, and attacks which start with a recollection of something that has happened before.

Finally, a certain number of patients with temporal lobe diseases have an *inability to talk* or a true aphasia preceding the seizure, or as the sole manifestation of their difficulty.

#### Patients' descriptions of symptoms

The following verbatim descriptions given by the patients serve to illustrate the vagueness of these symptoms.

##### Case 1

**Patient:** "The best I can tell you is that I just feel kind of numb and I just kind of go away, you know, and just feel queer. Just the best I can tell you is feeling queer. It don't last over a minute or two and then I'm just like normal again."

**Patient's Husband:** "She'd feel 'em coming on her, but yet she couldn't explain how it was, and if she was doing anything, she would just make a dive for the bed and she wouldn't more than lay down until she'd get up and go on about her work and she knew that she was having them. She'd tell us she wished we could see how funny we looked. She says, 'You have the funniest actions I ever saw.' Now that was the beginning of the first spells. Says 'You look the funniest and have the funniest actions'; says 'I just wish you could see how you look.'"

##### Case 2

**Patient:** "Everything seems so familiar and real. It seems like I've dreamed it or it's happened before, but I know it hasn't happened before and I'm thinking with two minds at once."

**Doctor:** "Is there any change in the appearance of your surroundings?"

**Patient:** "They don't actually seem to move physically closer to me, but they just seem so much more real. For instance, if it were to happen right here I would feel like I had been knowing about every page on there all the time, and you were my long lost friend and we had rehearsed this before and I knew exactly what was going to be said next, but I wouldn't be at all surprised if it weren't said. I had that in church. I just knew a child was going to come walking up the aisle, but I knew I didn't know it, but I just couldn't resist the temptation to look down the aisle—I was sitting on an aisle seat—and of course there was no child coming up the aisle, but I wasn't surprised—I knew there wouldn't be."

##### Case 3

**Patient:** "I was just walking along the street and maybe think of something, or recall, or you know, just a funny feeling and sometimes it passes in my



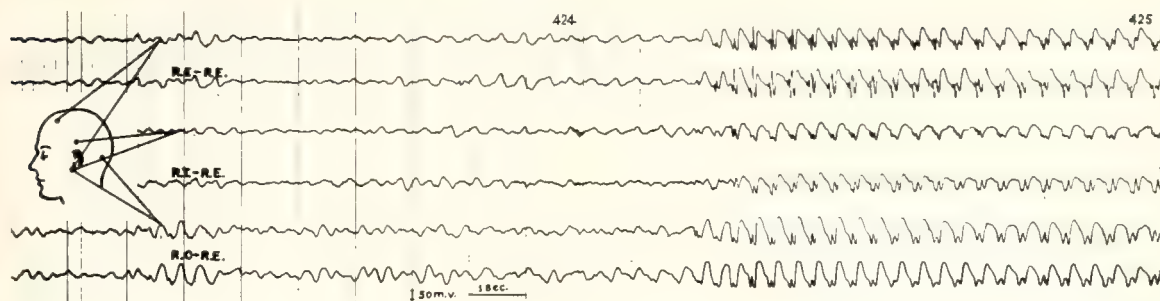


Fig. 2.

stomach, maybe I'll be sick on my stomach for a moment and then again I have a headache—slight headache right here in the front of my head."

#### Case 4

**Patient:** "It starts off with a queer taste in my mouth and then I become nauseated as though I would just have to go and vomit, but it isn't real bad, it's just a slight feeling of nausea and I get sort of a desperate feeling, and then it's all over in just a matter of a few, not even minutes—I'd say seconds. I have that several times a week and oftentimes I wake up during the night with one."

#### Differential Diagnosis

It is apparent from the descriptions given above that in many instances where the patient has never had an outright convulsion, the differential diagnosis between a minor epileptic seizure and hysteria can be extremely difficult. A third possibility frequently comes into the picture—namely hypoglycemia. Patients suffering from a convulsive disorder frequently have their seizures when their blood sugar is low, and in such cases it may be difficult to distinguish between a psychomotor attack of this bizarre type and a hypoglycemic reaction.

In general, true convulsive seizures are characterized by a sudden onset and by a tendency to recur in the same form. When a history of such attacks is obtained, and when the diagnosis of epilepsy is not self evident, electroencephalographic studies—a tracing taken during sleep, and possibly one following the injection of Metrazol—should be undertaken to aid the diagnosis.

#### Therapeutic Agents

The third reason for the failure of therapy in many instances is that knowledge concerning the newer medications for the treatment of various forms of epilepsy—their indications and contraindications—is inadequate.

#### Medication useful in the treatment of epilepsy

The old stand-bys phenylethylmalonylurea (phenobarbital) and diphenylhydantoin (Di-

lantin) are still the mainstay of therapy, since they are the safest drugs and the ones whose effects are most completely understood. In general, the safest procedure is to start treatment with these drugs. Combinations of drugs are usually far more effective than any single agent used alone, and there is much evidence to suggest that the therapeutic effects may be additive, while the toxic effects are not necessarily so.

These two drugs, however, are relatively ineffectual in many patients suffering from temporal lobe seizures. It is our impression that 3-methyl, 5, 5-phenylethyl hydantoin (Mesantoin) will frequently control psychomotor seizures which are not helped materially by phenobarbital or Dilantin. This drug is most safely started in very small doses of 50 mg. per day, the dose being gradually increased over a course of two or three months.

Another new drug, not yet generally available, is phenylacetylurea (Phenurone). This drug is very effective in treating temporal lobe seizures. It has unfortunate toxic effects on the blood<sup>(2)</sup> and liver<sup>(3)</sup>, and produces a remarkably high incidence of psychosis in those patients with the pre-existing personality disturbances which often accompany psychomotor epilepsy<sup>(4)</sup>. It is evident that Phenurone will be a dangerous drug to use, but it has controlled certain cases which have not been favorably influenced by any other available medication.

#### Medications useful in the treatment of petit mal

Trimethiodione (Tridione) and dimethyl-ethyl oxazolidine dione (Paradione) continue to be the most effective drugs in the therapy of true *petit mal*. The term "*petit mal*" must be used with caution, since it is a clinical description of a minor attack characterized by sudden loss of consciousness without stereotyped movement and without convulsion. Minor lapses of consciousness

may occur in many types of epilepsy, but Tridione is effective only in that form which is associated with a synchronous discharge as observed on the electroencephalogram (fig. 2). There are occasional exceptions to this rule.

This form of convulsive disorder is greatly influenced by the injection of small amounts of Metrazol. There is much evidence to suggest that the source of this difficulty is some deep-seated area in the higher brain stem, rather than in the cerebral cortex itself.

In spite of careful clinical evaluation and the electroencephalographic studies, it is often difficult to predict which seizures will be controlled by Tridione, and which will be controlled by other drugs. Because of the toxicity of Tridione<sup>(5)</sup> and Mesantoin<sup>(6)</sup>, the most conservative approach is to start treatment in any case with Dilantin and phenobarbital. In cases which are not controlled by this combination, and especially in patients with psychomotor seizures or with the true form of *petit mal*, then recourse to Mesantoin or Tridione is indicated. It cannot be emphasized too strongly that these drugs have been responsible for many fatalities. Repeated leukocyte counts should be done, and the patient should be observed at frequent intervals. Prompt cessation of the drug and the institution of antibiotic therapy are indicated at the onset of a leukopenic reaction.

### Conclusion

The treatment of convulsive disorders is by no means mysterious or difficult. All that is required to help the epileptic patient is an interest in the problem and a willingness to work with each individual case until maximal control of the seizures has been obtained.

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## PREVENTIVE PSYCHIATRY AND THE NATIONAL MENTAL HYGIENE PROGRAM

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As public health workers, our primary purpose is to think and act in terms of prevention. The modern concept of prophylaxis is no longer limited to the prevention of disease by vaccination, quarantine, and sanitary measures. It also includes the arrest of disease which might result in chronic disability and dependency.

The field of preventive psychiatry is large, embracing countless symptom-complexes with many etiologic factors. Unfortunately, many people appear to consider mental hygiene in the light of a single condition and expect a simple formula for prevention. If we include the behavior disorders, the neuroses, the psychoses, and the organic diseases of the nervous system, it is obvious that many different approaches to the prevention of these diverse conditions are necessary.

The cause and cure of many psychiatric conditions are already known. Syphilis of the central nervous system is an example. In other cases, either the cause or the cure is unknown; and in many instances, neither is understood. In discussing a program of pre-

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vention and treatment in mental hygiene, we should not generalize to any greater extent than we would in speaking of a physical health program. In planning a preventive program, it may be helpful to divide the field into areas, and eventually to deal with specific conditions. For purposes of discussion, three areas where preventive psychiatry may be most effective have been selected.

### *Three Fields for Preventive Psychiatry*

#### *Early detection and control*

Some psychiatric disorders, if detected early, may be cured. Others, if a cure is not possible, may be brought under control, so that chronic disability is prevented.

Syphilis of the central nervous system has been selected as the first example, because it represents one type of organic brain disease, and we sometimes forget the large number of patients in mental hospitals who have organic psychoses. Intensive study and research have revealed the specific cause and treatment of paresis. Hence, the venereal disease program is preventive psychiatry in action. At one time, about half of our psychiatric beds were occupied by paretics. Now the figure is less than 10 per cent. Early detection and control of syphilis will continue to reduce the number of patients mentally ill from this disease.

Cerebral arteriosclerosis and senile changes in the brain are common causes of psychiatric disability. Since there is no specific remedy, the only approach is through the use of control measures. Research work now in progress on calcium and enzyme metabolism<sup>(1)</sup> may eventually lead to a means of controlling the pathologic process in the brain. Meanwhile, more emphasis should be placed on the medical, psychiatric, and social management of the aging patient.

Little is understood about the etiology of epilepsy or convulsive disorders, but their control by anticonvulsant drugs is a great accomplishment. It would be difficult to estimate the amount of suffering relieved, and the mental deterioration prevented in a large segment of our people so afflicted. Epilepsy is almost as common as diabetes, and possibly more disabling. Its control by drugs and other means presents a medical problem very similar to the control of diabetes.

Functional disorders represent a large group of psychiatric illnesses for which the cause and cure are not completely under-

stood. In this group we include the neuroses and the functional psychoses. Schizophrenia, or dementia praecox, is the most common psychotic illness. This illness has been studied for ages, and its nature is well understood. Some investigators feel that many etiologic factors are responsible for the symptom-complex. Recent investigations by Pincus and Hoagland<sup>(2)</sup> have led them to postulate that the breakdown in the mental process may be related to failure in the adrenal regulators of salt balance at a time of stress. In any event, it seems that the cause may be so inherent in the human organism that there is little hope of finding a specific cure or method of prevention. Apparently the problem will have to be approached like that of diabetes—namely, through early detection and control.

In our mental hygiene clinics, we hope to measure the schizophrenic patient's assets and liabilities, build up his latent resources, induce him to recognize his limitations, and teach him to live within them with a minimum of help. The clinic is also used for preventive work. Leaders in other fields concerned with the well-being of the individual learn from the clinic staff methods of supporting these patients. They also learn how to detect danger signals in normal people, especially children, which would indicate a personality deviation likely to lead to serious illness later. For example, if shyness is encountered in a school child, a positive approach to the problem can be made by the school staff and his family through a process or "socialization." We do not know that this would prevent schizophrenia, any more than we know that a certain diet might prevent pernicious anemia; but we do know that such a procedure is likely to improve the child's mental health.

#### *Training in psychosomatic medicine*

There is every reason to believe that psychological medicine is still so neglected in the training of medical students and interns that they are not prepared or equipped to handle the many psychosomatic problems encountered in a community practice. As physicians and public health workers, we must always be aware that mind and body function as one organism<sup>(3)</sup>, and that emotional and physical illnesses are likely to be found together. It is the responsibility of every physician to deal with what he sees. How will he see the emotional components of his patients' illnesses if he has not been trained to do so?

Better understanding of psychological medicine would prevent countless patients from going to "quacks" for help.

Cardiac neurosis will serve as a good example of a disorder in which training in the emotional as well as the physical aspects of the human organism is necessary. Dr. Paul White, cardiologist, has pointed out that cardiac neurosis is produced at times by the physician himself. In a large percentage of patients with a diagnosis of heart trouble, he finds no disease in the heart. Many patients having minimal heart disease live a normal span of life, but are constantly afraid. How can we help these people if we fail to relieve their anxiety?

Psychiatry had its day of trying to discover a specific etiology and treatment for mental illness. You remember when "autointoxication" and "focus of infection" were popular conceptions and led to numerous surgical operations. When this school of thought failed to produce results, the medical profession began to remind psychiatrists that they possessed no precision instruments. Out of this failure came something which is fundamental to the practice of medicine—the concept of the unity of mind and body functioning coordinately. This means that in health and disease alike, the human being works as a total organism. We now look at the illness, and then at the patient who has it. It is obvious that emotional factors play a large role even in physical illness. On the other hand, an emotional conflict can not be long maintained without altering the body's economy. This concept of psychosomatic medicine has brought psychiatry and medicine closer together, and has changed the complexion of both.

It follows, then, that if psychosomatic disorders are to be treated or prevented in medical practice, greater emphasis must be placed on teaching this new concept to all members of the medical profession. Research in the field must also be stimulated, and the community should be prepared to accept this knowledge.

#### *Manipulation of early environment*

In the field of public health, we are interested in preventing specific and nonspecific diseases, and in promoting more abundant health—or positive health, as it sometimes is called. These two principles are applied in the fields of nutrition and sanitation. We have been successful in combatting and

curing deficiency diseases by diet. With special diets, some nonspecific illnesses can be treated and more serious complications prevented. Even more important, by giving the average citizen more and better food, we have raised the level of physical and mental well-being of our population. This last accomplishment is something on the positive side.

In our sanitation program, we have striven to rid our communities, our houses, and our bodies of filth, vermin, and other harmful agents. In the beginning, our primary aim was to prevent illness. Now we know that our sanitary programs make our environment more wholesome, and make us healthier individuals.

The principles applying to nutrition and sanitation can be applied to preventive psychiatry without waiting for a magic formula.

It is not difficult to recognize that just as our bodies require food, air, and water, so also we come into this world with emotional needs which must be supplied. We are acquainted with these needs and are well aware of the many unpleasant consequences of underfeeding or overfeeding the emotional appetites of man.

Likewise, we all know what is meant by a healthy or unhealthy emotional environment. Poor emotional sanitation may lead to stunted and warped psychological growth, or it may lead to mental illness. Good emotional sanitation should permit healthy psychological growth and provide the individual with stamina to withstand the trials of life with a minimum of anxiety. Providing a secure environment and meeting the emotional needs of the individual should prevent mental illness and at the same time, promote more robust health.

#### *Public Attitude Toward Mental Health*

Throughout history, sporadic attempts have been made to interest the public in mental health, but in comparison with that in other branches of medicine and science, the progress made in this field has been very slight. Perhaps it is a trick of the human mind which prevents one from looking at oneself objectively. It is the most difficult thing in the world to eliminate old ideas of superstition and prejudice, and we find that many of our people still have primitive attitudes toward emotional illness. This tendency to put out of mind and out of sight anything pertaining to mental disorders has resulted in a stigma more difficult to combat than that attached to venereal diseases a few



years ago. Before our psychiatric program of treatment and prevention will be effective on a large scale, everything possible must be done to change the attitude of the public. The subject of mental health and illness will have to be treated with dignity and respect by the press, the radio, the movies, and especially by the health worker.

### *The National Program*

The great need for improvement in mental hygiene services was emphasized at the beginning of World War II, when about 1,800,000 of our young men were rejected by the military services because of emotional factors<sup>(4)</sup>. The 387,000 medical discharges issued during the war for psychiatric reasons<sup>(4)</sup> accounted for about one third of all medical discharges. This experience—and perhaps the changed attitude resulting from the war—stimulated public interest in the improvement of mental health on a nation-wide basis. In 1947, Congress appropriated the first federal funds under the National Mental Health Act. These funds have been steadily increased, until this year about \$10,000,000 will be appropriated for mental health, to be used for training, research, and grants to states. These funds are administered by the Surgeon General, acting on the advice of the National Advisory Mental Health Council and its committees—a group of leaders from many scientific fields, representing all areas of the United States.

### *Training*

Training has been considered of great importance because of the shortage of personnel in all mental health disciplines. Neither research nor community services can be implemented without more emphasis on training. Funds up to \$2,551,698 have been provided to institutions of various types. One hundred and fifty-nine training grants have been given on the basis of merit and need. A number of the institutions also have training stipends from the Public Health Service ranging from \$1600 to \$3600 per year. There were 464 such scholarships awarded last year. The postgraduate student applies directly to the institution for training. A list of participating institutions will be furnished by the Public Health Service on request.

In my opinion, one of the greatest steps taken in recent years toward better medical education is the financial assistance now being given to forty-two of our seventy-nine class A medical schools. To support the

undergraduate teaching of psychiatry in these forty-two medical schools grants totaling \$1,500,000 have been awarded for a three-year period, July 1, 1949, to June<sup>30</sup>, 1952. Each school will receive up to \$10,000 for the first year, \$12,500 for the second year, and \$15,000 for the third year. The departments of psychiatry are now in a position to employ teachers and supervisors who will be able to present psychological medicine in an interesting and practical manner. The doctor of the future will be better equipped to treat a great number of patients who are now outside many physicians' knowledge and experience.

### *Research*

Research is paramount in our program, and many individuals after being trained in research methods will go into this work. Research projects are financed on the basis of their merit, and may be conducted by individuals or groups. Fifty-seven research grants, amounting to \$800,000, are being administered by the National Institute of Health during the present year. Now under construction at the National Institute of Health is a clinical research center which by 1952 will house 500 patients, including 150 psychiatric and neurologic patients, and which will provide extensive laboratory space for research.

### *Community services*

Under provisions of the National Mental Health Act, grants-in-aid are distributed to the various states and territories for preventive community services. Federal funds amounting to \$3,500,000, and at least one half of this amount in state funds will be spent next year. Nearly all states are providing centers for diagnosis and treatment, public education on mental health, and staff training. Clinics providing diagnostic and therapeutic services also serve as demonstration centers where health workers, community workers, educators, and other interested persons may learn mental hygiene methods.

### *Conclusion*

Public funds have been provided at national, state, and local levels for research, training and community services. These have made it possible for hundreds of brilliant young men and women to enter the field of psychiatry. Public health workers, teaching centers, and practicing physicians should do everything possible in their communities to

prepare the way for these highly trained individuals. Health workers should develop a healthy attitude toward mental hygiene, and serve as leaders in persuading the public to lose its fear of mental illness and turn to the medical profession for help.

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## THE PSYCHOLOGICAL CLINIC OF THE UNIVERSITY OF NORTH CAROLINA HEALTH SERVICE

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and

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CHAPEL HILL

The Veterans Administration and Public Health Service Training Program for clinical psychologists, psychiatrists, psychiatric social workers, and psychiatric nurses, was organized to meet the grave shortage of professional personnel and the vastly increased public need for psychologic services. The program has stimulated both state and private agencies to develop their own resources for service and training in these vitally important areas.

### *Organization of the University Clinic*

At the University of North Carolina, the need for more adequate psychologic services has long been recognized, but the necessary funds to meet these needs have not been available. Recently, however, the University, with the aid of the United States Public Health Service, has enlarged and integrated previously existing services into a psychological clinic, which is an integral part of the University Health Service, under the direction of the University physician. As additional funds and personnel are received, this clinic will be expanded, since its administrative, diagnostic, therapeutic, and research

facilities differ only in size from larger units.

It is planned to increase the amount of psychiatric participation in the clinic as soon as possible, but the present lack of qualified psychiatrists makes this difficult. In expanding the present service, the standards for training that the American Psychiatric Association and the American Psychological Association have recommended will be followed. The clinic will cooperate closely with the Department of Psychiatry and the School of Medicine.

At the present time regular psychologic service, involving treatment and diagnosis, is available only to students, faculty, and employees of the University, since adequate service could not be rendered to a larger group with available personnel. Demand for services at present, however, runs far ahead of supply.

The staff of the clinic presently includes one full-time clinical psychologist, two part-time clinical psychologists, seven psychological externs, a part-time consulting psychiatrist, and a secretary. Although the nature of the population served does not usually demand the services of a psychiatric social worker, occasionally this feature would be desirable for training purposes. The present medical staff of the Health Service includes a director, the University physician, and six associate physicians.

### *Diagnostic and Therapeutic Services*

#### *Referral procedures*

The system of referral for psychologic service is somewhat as follows: When a thorough physical examination of the patient fails to provide sufficient evidence for a diagnosis, or when it is felt that important psychologic factors are involved, the patient is referred for evaluation to the Psychological Clinic. Here he is first seen by one of the staff psychologists for intake, who decides whether diagnostic tests are indicated and, if so, what particular devices are to be used. Appointments with the patient for diagnostic study are then scheduled. Should the clinician feel that psychotherapy is indicated, he will note this upon the contact sheet. The patient will then be assigned to one of the staff for treatment.

Through frequent conferences at regular intervals, the referring physician is kept continually in touch with the progress made by his patient. These conferences also provide an excellent opportunity for the two clini-



cians to study the patient as a whole, functioning individual. Many psychosomatic conditions that might resist the techniques and treatment of either clinician working individually can be profitably undertaken by the two in combination. Such teamwork between the two disciplines is of inestimable value to the patient and to the clinicians. The interrelationship of the psyche and the soma is kept constantly in mind by both the physician and the psychologist in their approach to the patient. The progress of therapy is regularly discussed during staff conferences with the attending psychiatric consultant, who may make valuable contributions to diagnosis or treatment.

#### *Direct services*

An important aspect of the service provided by the Psychological Clinic is that rendered to the deans of the various schools, the deans of men and women, and to the students directly. Students who request aid in meeting recognized problems of adjustment are often referred directly to the Psychological Clinic. This aspect of service meets a vital need by providing early treatment before more serious maladjustment results.

Many students, upon recognizing their own need, apply directly to the clinic for help. In this situation it becomes the responsibility of the psychologic clinician to obtain a physical clearance for the patient by referring him to one of the physicians of the Health Service. There can be no really representative program of mental health that does not take cognizance of the importance of physiologic function.

#### *Extent of treatment*

Short-term therapy is the rule in the Psychological Clinic at present. This means that treatment does not continue longer than a year except in cases of unusual need. The clinic makes no provision for the extended treatment of psychotic patients, since it is felt that such treatment should be conducted on an inpatient basis. When psychotic disorders are diagnosed, the family and relatives of the patient are notified, and recommendations for treatment elsewhere are made.

#### *Other Functions of the Clinic*

The clinic, however, does not exist for service alone. It has at least two other important functions—namely, the training of clinical psychologists, and research in the

prevention, diagnosis, and treatment of mental disease. With existing facilities, advanced students may obtain closely supervised clinical experience at a level comparable, in many respects, to the clerkship in medicine. The wide range of syndromes encountered among clinic patients provide experience with nearly all types of mental disease—from the adjustment problems of the average college student to the obviously acute psychopathologic disorders.

#### *Training in diagnosis and therapy*

Training in the diagnosis of mental disease entails knowledge of a wide range of psychometric devices and techniques. The days when psychologic testing consisted of obtaining an I.Q. and requiring the patient to complete a paper and pencil personality inventory have gone. Today the clinician has at his disposal many effective and reliable instruments which call for extremely specialized knowledge and experience in their use. Experience with these techniques must be gained under the supervision of an experienced diagnostician, and through psychiatric staff conferences.

Psychologic therapy has likewise expanded and developed its procedures. Although some clinicians employ the relatively simple techniques of reassurance and suggestion, they do so by choice and not from a lack of knowledge. Therapy will probably continue to be a highly individualized procedure, based upon the clinician's estimate of the patient's conscious and unconscious needs.

Training in therapy, even more than in diagnosis, has to be closely supervised. Indeed, the nature of the supervisor-extern relationship itself comes to resemble, in some respects, that of the therapist-patient relationship. The successful therapist is usually careful not to let his limitations obstruct or bias his view of the patient.

Although the limitations of the externship do not permit therapeutic training on an advanced level, some familiarity with a fairly wide range of therapeutic viewpoints and procedures is desired. A knowledge of the more advanced procedures, involving intensive reorganization of the patient's personality, must be offered as postdoctoral or resident training. Through constant exposure to the psychiatric approach, the extern is made aware of the contribution of somatic procedures to the treatment of mental disease. Of almost equal import is the development, in staff and students, of the ability to

discern the major problems that come within the scope and range of the Psychological Clinic.

### Research

Research begins with a critical question or questions. An atmosphere that encourages and fosters independent thinking also invites investigation into the problems of psychological medicine.

In developing the function of research, the staffs of the Health Service and the Psychological Clinic again will operate as a team of medical specialists. This phase of the Psychological Clinic has necessarily been delayed until the more pressing functions of diagnosis, treatment, and training were well established. Now that this task has been accomplished, individual and group investigations are to be initiated.

The viewpoint in research, as well as in treatment and diagnosis, is organismic. Each member of the clinical team has an important contribution to make to the design of investigations, the compilation and analysis of data, and the drawing of conclusions. Other University facilities (such as the Institute of Mathematical Statistics) make feasible a detailed analysis of all possible interrelationships of the raw data on a scale heretofore impractical. Through the cooperative use of these facilities it will be possible to utilize more fully the rich behavioral material obtained from the clinic, and, through systematic investigation, to provide new evidence for the understanding of behavioral pathology.

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Psychiatrists have taken a leaf from the book of modern industry, and now they estimate a person's various capacities, develop and direct his abilities, and in brief, equip him to go out and do what he must as a productive member of society. Similar thinking and similar purposeful technics are being used to obviate the necessity for hospitalization. It is no longer considered good psychiatric practice, or good medical practice for that matter, to say "you need a vacation," which once used to be the universal recipe when the medical adviser did not know what else to say. Sardonicly enough, however, "loafer's delight" or "do nothing for awhile," with its etiological potentialities for mental and physical illness, is gradually receiving great impetus through pension schemes with enforced retirement. These erroneously assume that a man's goal is ultimate idleness. Too often, sudden decomposition from carrying heavy responsibility is producing an emotional caisson disease which is gradually appearing in all doctors' offices in all specialties, even though not generally recognized. At least part of the cure is to have the patient reassume real responsibility.—Burlingame, C. C.: *Psychiatry* in 1950, J.A.M.A. 144: 1367 (Dec.) 1950.

## BULBO-RESPIRATORY POLIOMYELITIS: PROBLEMS OF DIAGNOSIS AND TREATMENT

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WINSTON-SALEM

The correct diagnosis of poliomyelitis depends on the clinician's having a heightened sense of suspicion when faced with a febrile illness during an outbreak of poliomyelitis, and following up this suspicion with a careful search for signs indicating involvement of the central nervous system. The finding of such signs indicates the need for an examination of the spinal fluid to help confirm the diagnosis. Once the diagnosis of poliomyelitis is made, one must be doubly alert to detect signs of bulbo-respiratory involvement. Recent improvements in the management of bulbo-respiratory poliomyelitis should do much to reduce the mortality in this disease if the proper diagnosis is made early.

### *Recognition of the Types of Bulbo-Respiratory Poliomyelitis*

In approaching this diagnostic problem, one should recognize that there are four possible types of involvement: (1) central, (2) pharyngeal, (3) laryngeal, and (4) respiratory-muscular. Frequently, more than one area is involved, but a separation of the presenting signs into these four categories (table 1) will enable one to direct therapy more intelligently than is possible if all such cases are considered in one group as "bulbar" poliomyelitis.

The one general effect produced by involvement of any of these areas is anoxia, which may be manifested in various ways. Restlessness, irritability, and apprehension are frequently seen early in bulbo-respiratory disease. A rising pulse rate is another early sign. Mental confusion or actual coma may indicate a true encephalitic involvement, or may result from cerebral anoxia. Pulmonary edema is not at all rare in bulbo-respiratory poliomyelitis, and is frequently caused, or at least increased, by anoxia. Cyanosis is of course an obvious and late sign of anoxia that should be avoided by the recognition of earlier signs and proper treatment of the patient.

Read before the Section on Pediatrics, Medical Society of the State of North Carolina, Pinehurst, May 3, 1950.

From the Department of Pediatrics, Bowman Gray School of Medicine of Wake Forest College, Winston-Salem, North Carolina.



**Table 1**  
**Bulbo-Respiratory Poliomyelitis**  
**—Diagnostic Signs**

**General Signs of Anoxia**

Restlessness  
Increasing Pulse Rate  
Confusion  
Pulmonary Edema  
Cyanosis  
Coma

**Central Involvement**

Irregular Respiration, Pulse, or Blood Pressure  
Encephalitic Signs  
Hyperthermia  
Peripheral Collapse

**Pharyngeal Paralysis**

Nasal Voice  
Nasal Regurgitation  
Mucus in Pharynx  
Dysphagia

**Laryngeal Paralysis**

Hoarseness or Aphonia  
Stridor

**Paralysis of the Respiratory Muscles**

Shallow Breathing  
Paradoxical Movement  
Reluctant or Interrupted Speech  
Use of Accessory Respiratory Muscles

*Central involvement*

While involvement of the third to eighth cranial nerves is not usually serious, central disease may affect the respiratory, circulatory, or vasomotor centers, with a resultant threat to life. A specific type of respiratory disturbance is produced, the breathing becoming shallow, irregular, and generally ineffective. Unlike patients with paralysis of the respiratory muscles, these patients can take a deep breath on request. The pulse and blood pressure also become irregular. Various encephalitic signs, such as stupor, irrationality, or even convulsions, may be due to direct involvement by the disease process, or may be secondary to anoxia.

Such patients may occasionally have a marked hyperthermia, with temperatures above 106 F., and yet have a cold, clammy skin. Although this picture is suggestive of peripheral collapse, the blood pressure is frequently found to be normal or slightly high, but with a small pulse pressure.

*Pharyngeal paralysis*

Damage to the centers of the ninth to the twelfth cranial nerves causes the classical interference with swallowing noted in the usual "bulbar" case. Some of the difficulty may be due to paralysis of the tongue, but most of the trouble results from weakness of the soft palate and the pharyngeal muscles. The earliest sign of this type of paralysis is a nasal voice or the regurgitation of food

through the nose. Depending on the areas most seriously involved, difficulty in swallowing solids or fluids then appears.

Interference with respiration results from the pooling of mucus in the pharynx and its aspiration into the trachea. Any of the above described signs of anoxia may result from this interference with respiration, and should serve as warning signs to look for other evidence of pharyngeal paralysis. It is most important to recognize this type of shallow breathing, inhibited by the fear of aspiration, since the simple measures of pharyngeal suction, extreme postural drainage, and reassurance may solve the difficulty.

*Laryngeal paralysis*

Laryngeal paralysis is due primarily to involvement of the tenth cranial nerve center, but it is important to make a clinical distinction between this disorder and pharyngeal paralysis. Hoarseness, aphonia, or stridor will easily lead to the correct diagnosis, but again one may be led to a closer consideration of the laryngeal function through the general signs of anoxia which may be the first indication of this complication. Interference with respiration is caused either by spasm of the glottis or by paralysis of the abductors. Listening to the patient's breathing by holding the stethoscope over the mouth or nose may suggest the presence of laryngeal paralysis, but a definite diagnosis requires laryngoscopy.

There is some difference of opinion regarding the value of tracheotomy in bulbo-respiratory poliomyelitis, but there is no question that this procedure may be life saving in cases of true laryngeal paralysis.

*Paralysis of the respiratory muscles*

Involvement of the high cervical cord causes paralysis of the diaphragm and intercostal muscles. This may occur in combination with any of the true "bulbar" involvements or may appear as an isolated phenomenon. In any patient with paralysis of the neck or shoulder, however, one should be particularly concerned about respiratory paralysis, since the centers innervating these areas lie so close together. Those cases without true bulbar involvement are usually recognized readily by the shallow breathing and the increased use of the accessory muscles of respiration. Dilation of the nostrils, increased use of neck and shoulder muscles, and even a curious attempt to "swallow" air may be

seen. If the intercostal muscles are intact but the diaphragm is paralyzed, there may be paradoxical movement of the abdominal wall. In the reverse situation the chest cage may not move or may even sink in when the diaphragm descends, thus giving an exaggerated picture of abdominal breathing. In occasional instances, increased spasm of the thoracic muscles may interfere with chest excursion and actual paralysis is not marked.

Early respiratory muscle paralysis, especially in small children, may be difficult to detect. Minor evidence of anoxia or a reluctant, interrupted speech may indicate the interference with air exchange. Splinting of the chest or abdomen by the hands may then make the disturbance more obvious, as the diaphragm or intercostal muscles respectively are forced to carry on alone.

When the facilities are available, a recording of the air exchange on a metabolimeter will give one visual evidence of the progress of the disturbance. Almost as much information, however, can be gained by listening to the air exchange at the mouth and nose with a stethoscope. In some instances, particularly when only one leaf of the diaphragm is affected, fluoroscopic examination may be desirable. The recent introduction of direct oximetry has also helped the clinician recognize the presence of anoxia and observe its response to treatment.

As I said in the beginning, more than one of these four areas may be involved in any given case, so that a clear differentiation is often difficult. However, intelligent therapy demands as close a differentiation as possible. Therapeutic measures which are valuable in one type of respiratory difficulty are contraindicated in another.

#### *Recognition of Pulmonary Complications*

It must also be stressed that further interference with air exchange may be caused by secondary local changes in the lungs themselves. Thus pulmonary edema, atelectasis, or pneumonia may complicate the picture. In our experience pulmonary edema is the most important of these complications. It results from a combination of anoxia due to any cause, interference with air exchange by laryngeal obstruction, immobilization of the chest, and possibly actual left ventricular failure.

Pulmonary changes will be noted early if one pays careful attention to the progress of the patient, and is on the look-out for the

occurrence of rales in the chest, impairment of the percussion note, and fluoroscopic changes. Because of the difficulty of making satisfactory examinations of patients encased in a respirator, these early signs of pulmonary complications are often missed. However, the introduction of positive pressure masks and domes now allows much more complete examinations. In addition, the use of intermittent positive pressure breathing has definitely reduced the incidence of pulmonary complications in our experience.

#### *Differential Diagnosis*

Diseases which must be considered in the differential diagnosis of bulbo-respiratory poliomyelitis include diphtheria, brain tumors, and tick paralysis. The most difficult differentiation, however, lies between the various forms of poliomyelitis and the other viral encephalitides. During epidemics of poliomyelitis other causes of encephalomyelitis are often overlooked, and between epidemics non-paralytic poliomyelitis is frequently diagnosed as "encephalitis." Actually the differentiation is often impossible without specific laboratory tests.

There is now an imposing list of viruses that can cause encephalomyelitis, and a number of diseases of supposedly viral origin must also be considered. The most important in this part of the country are: the arthropod-borne encephalitides of this country, mumps meningo-encephalitis, lymphocytic choriomeningitis, Cocksackie virus infection, and the Guillain-Barré syndrome. Encephalitic changes may also occur in association with the herpes virus, lymphogranuloma venereum, infectious mononucleosis, and measles.

In the majority of cases showing encephalomyelitic changes, however, the etiology remains obscure even after the most exhaustive study.

#### *Treatment*

##### *Central involvement*

The treatment of each type of bulbo-respiratory poliomyelitis is different, although fundamentally the problem is one of preventing anoxia. There is little that one can do by way of treatment for the purely central types, except offer some symptomatic relief. The administration of hypertonic glucose (a 10-33 per cent solution) intravenously to aid in the reduction of cellular edema should do no harm. However, as with so many other therapeutic regimens advocated for poliomyelitis,



this has not been given a controlled study, and its real value is not clear. Although one is usually warned against putting these patients in a respirator, there are times when such a procedure will be life saving.

Because of the irregularity of the breathing, it is possible that better results will follow intermittent positive pressure breathing with a self-cycling valve. We have used such an appliance, the "Pneophore,"\* in other types of respiratory paralysis with excellent results. Our experience with its use in purely central respiratory paralysis has not been extensive enough for us to gauge its value here. Positive pressure breathing has been most valuable as an aid in the care of patients in respirators. The "Pneophore" (like the positive pressure domes) has made it possible to give much better nursing care to such patients, since the patient's breathing can be carried on while the respirator is opened. We feel that it has also helped minimize the tendency to pulmonary edema and atelectasis.

Pulmonary edema is a common complication of respiratory paralysis, although its exact pathogenesis is not known. We feel that the incidence can be reduced considerably by repeated changes of the patient's position from back to face and by the routine use of positive pressure oxygen breathing for five to fifteen minutes every hour or so. Bronchoscopic drainage may be necessary for patients with atelectasis.

#### *Pharyngeal and laryngeal paralysis*

The main problem in patients with pharyngeal paralysis is of course the pooling of mucus in the throat. Removal of the mucus by careful suction and good postural drainage may be all that is necessary in these cases. It is particularly important not to attempt oral feeding too early. One must do everything possible to allay fear in these patients, in order to ensure good cooperation in attempting to keep the pharynx dry.

The role of tracheotomy is a most debatable one. Although the use of this technique under special circumstances has been advocated for years, the indications for its adoption are not clear. Some authorities have recommended that tracheotomy be used for all cases showing signs of bulbo-respiratory paralysis, but I believe we should be very cautious in resorting to tracheotomy unless clear indica-

tions exist. Unquestionably, it is mandatory for the unusual cases of laryngeal involvement in which there is severe spasm of the glottis or abductor paralysis. Occasionally it may be necessary to by-pass the accumulation of mucus in cases where good pharyngeal suction is impossible. In most cases, however, we feel that better results will be obtained by other means.

#### *Paralysis of the respiratory muscles*

Patients who have paralysis of the respiratory muscles without other involvement require help with their breathing. This should not be postponed too long, for even short periods of severe anoxia may do irreparable harm. In addition to the standard tank respirators, we now have two other aids—namely, the rocking bed and electrophrenic respiration. The latter is not yet developed to the point of routine use, but may be of distinct value in the future. The use of the Respir-air Bed, which is also relatively new, may avoid the need for a respirator. If so, it will be of particular value because of the greater ease of weaning a patient from its use to unaided breathing.

#### *Conclusion*

The various types of bulbo-respiratory paralysis have been considered separately, but unfortunately they often occur together. It is in these latter cases that the clinician must be particularly astute to work out the best possible therapeutic regimen for the patient, and must be most alert to detect the early signs of progression of the disease or complications. We feel that such close observation will lead to a significant improvement in mortality among these cases.

#### *Abstract of Discussion*

**Dr. Jean C. McAlister (Greensboro):** I would like to ask Dr. Lawson if they found an increase in blood pressure to be a very bad prognostic sign. We thought we did in Greensboro.

Although we had no control series of cases, we did feel that the administration of hypertonic glucose in small amounts every eight hours was extremely beneficial when we recognized the cases early. We think that we lost one patient, however, by giving too much fluid. That is something we will certainly have to be careful about in these patients, since they go into heart failure very easily.

**Dr. Lawson:** In answer to Dr. McAlister's question, we did not often find an increased blood pressure in the acute cases. We have noted a tendency, as so many people have, to a gradual increase in blood pressure in the long-standing cases.

At the present time, many people feel that hypertonic glucose is of distinct advantage. Unfortunately, it has not been put to the test of a real control series. Dr. Stimson of New York feels that

\* Manufactured by the Mine Safety Appliance Company.

a 10 per cent solution of glucose should be given. Dr. Johnson of Detroit, however, feels that the solutions should be even more concentrated. He uses a combination of one part of saline to two parts of 50 per cent glucose, giving 40 to 100 cc., depending on the age of the patient, every one to two hours. He has apparently obtained good results with this method in an uncontrolled series of cases.

The most depressing cases that we have seen have been those of central involvement, with temperatures as high as 106 or 107 F., with cold, clammy extremities, but with increased blood pressure. We have not been able to do anything for these patients. It would seem that a trial of hypertonic glucose would certainly be justified in such cases, in the hope that it might do something about reducing edema of the central areas.

## BRONCHOSCOPY IN THE DIAGNOSIS OF BRONCHIOGENIC CARCINOMA

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RALEIGH

Since 1933, when Evarts Graham performed a successful pneumonectomy for bronchiogenic carcinoma<sup>(1)</sup>, there has been some hope for patients with cancer of the lung. Since that time thoracic surgery has made rapid strides, and no longer entails an excessive mortality. Until some better method of treating cancer is developed, it offers the only hope for victims of bronchiogenic cancer.

### *Incidence and Etiology*

In recent years there has been either an apparent or a real increase in the incidence of bronchiogenic carcinoma, and most authorities agree that the incidence of this disease actually has increased. Today the lung ranks second only to the stomach as a site of primary cancer. Smoking has been given as a possible explanation for this increase in bronchiogenic carcinoma, but there is not a great deal of concrete evidence to support this contention.

Bronchiogenic carcinoma is more common in males; in a collected series of 8,575 cases<sup>(2)</sup>, 79 per cent of the patients were men and 21 per cent were women. About 70 per cent of the cases occur between the ages of 40 and 60. Malignant lesions are more common in the right lung and occur more frequently in the upper lobes. Bronchiogenic carcinoma is by far the most common type of pulmonary neoplasm. However, fibrosarcoma, lymphoblastoma, melanoma, alveolar carcinoma, and neurogenic sarcoma do occur as primary lung

tumors. Primary alveolar carcinoma occurs with equal frequency in males and females<sup>(3)</sup>.

### *Diagnosis*

In the early stages of the disease, there are few if any symptoms. In recent years a large number of cases have been discovered by routine chest films, and in mass surveys for tuberculosis. In Boston between 1945 and 1950, 536,012 people were screened in a chest x-ray campaign. Of this number, 402 were suspected of having pulmonary cancer. One hundred and seventy-seven were followed up, and 52 were proved to have cancer of the lung<sup>(4)</sup>. These were all apparently healthy people with no pulmonary symptoms. It is apparent from these figures that the early discovery of pulmonary carcinoma should be an important by-product of every mass chest survey for pulmonary tuberculosis.

The most common symptoms are cough, dyspnea, weakness and fatigue, fever, and hemoptysis. Relatively small tumors which occlude a large bronchus or which occur in the periphery near the pleura are apt to produce symptoms fairly early in the disease. However, a tumor may be very large and still be asymptomatic.

Physical signs are usually absent early in the disease, and when present, usually result from complications of the tumor. If a bronchus is occluded, there will be signs of atelectasis or of a lung abscess. Involvement of the pleura will usually produce signs of pleurisy or fluid in the chest.

Röntgenograms of the chest will usually show the lesion even very early in the course of the disease. A positive diagnosis cannot be made from a chest film, however. When the lesion is in a small bronchus, bronchography can be used to demonstrate the obstruction. Bronchoscopy can be used for diagnosis if the growth is in a large bronchus where it can be visualized and a specimen removed for biopsy. Overholt<sup>(4)</sup> has been able to see the tumor in 37 per cent of his cases, and has obtained a positive biopsy in 34 per cent. Ochsner<sup>(1)</sup> did a bronchoscopy on 125 out of 147 cases, and obtained positive biopsies in 61, or 41.5 per cent.

In recent years the technique of Papanicolaou has been widely used in suspected cases of bronchiogenic carcinoma. Cells found in the sputum can be used for examination, though they are not as satisfactory as cells obtained by aspiration during bronchoscopy. Overholt<sup>(4)</sup> has obtained positive

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results by this method in 61 per cent of his proven cases, and has had only 1.4 per cent false positive reports. Results were equivocal in 15 per cent and negative in 24 per cent of his cases of bronchiogenic carcinoma.

### *Treatment*

The generally accepted treatment is surgical removal of the involved lung and hilar nodes. Following this method of treatment about 20 per cent of the patients can be expected to survive five years or more.

### *Report of Case*

A 59 year old white male was admitted to the hospital on August 5, 1948. He had had pneumonia in March, 1947, but apparently made a good recovery after eighteen days in the hospital. However, a chronic cough soon developed and persisted until his admission. The cough improved after he stopped smoking, but during the month before admission it became more severe and was productive of thick yellow and brown sputum. He found that he coughed less at night if he slept on his right side. He had lost about 20 pounds in the last two months; his appetite was poor and he felt weak. He had no pain in the chest, no dyspnea, and no hemoptysis. He had enjoyed remarkably good health throughout his life.

The general physical examination was non-contributory. The patient's chest was large, short, and thick. There were no deformities of the thoracic cage, and expansion was good bilaterally. Slight dullness to percussion, noted in the mid-thorax in the right axillary line, extended posteriorly to the tip of the scapula. Breath sounds were normal, and no rales were heard.

Roentgenograms of the chest showed a diffuse infiltration of the right lower lobe. No hilar enlargement was noted. At bronchoscopy, an inflammatory process was observed within the right main stem bronchus between the middle and the lower lobe orifices. The lower lobe orifice was obstructed by a mass of tissue. This was removed and a considerable amount of purulent material was aspirated. Pathologic section of the removed tissue revealed a bronchiogenic carcinoma.

On August 16, 1948, Dr. Warner Wells operated on this patient, removing his right lung and a portion of the diaphragm that was involved in the growth. The patient was out of bed on the fourth day after operation, and was discharged from the hospital on the fourteenth postoperative day. To date he has shown no evidence of recurrence of the cancer, and is at work. His activity is somewhat limited, but he has no difficulty on moderate exertion.

### *Summary and Conclusions*

Bronchiogenic carcinoma is a common form of cancer, accounting for about 10 per cent of all carcinomas. It is most frequently seen in men over 40 years of age. There are very few early symptoms, and it should be suspected in all cases of resistant pulmonary infection.

We need to strive for earlier diagnosis in order to reduce the mortality from this disease.

Routine chest films offer the best hope of

early discovery of the lesions. When the tumor can be visualized and a biopsy obtained, bronchoscopy will give an accurate diagnosis. Cytologic studies of aspirated secretions are of great value when a biopsy cannot be obtained.

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3. Ikeda, K.: Alveolar Cell Carcinoma of the Lung. Am. J. Clin. Path. 15:50-56 (Feb.) 1945.
4. Overholt, R. H.: The Necessity for Surgical Exploration for Silent Pulmonary Lesions. Lecture.

### *Abstract of Discussion*

**Dr. George Ferguson:** I think we should be very cautious in treating exposed inflammatory lesions in people of tumor age, particularly if the lesion fails to clear completely. Certainly, the patients should be kept under very close observation.

## HEARING LOSS

RALPH ARNOLD, M.D.

DURHAM

There are only two types of hearing loss—conduction and nerve (or perception) deafness. No new information concerning deafness will be given in this paper. My purpose is to review these types of hearing loss for those who have to diagnose and treat the impairment. I feel that such a review is timely, since the state of North Carolina is setting up a program for adequate screening of children who are handicapped by hearing loss, in order to discover those that are amenable to treatment.

According to the League for Crippled Children, 1½ per cent of all children in our nation have a hearing impairment. In North Carolina the incidence is 3 to 5 per cent<sup>(1)</sup>. Since there is no program for screening of the adult population, less is known about the percentage of adults who have a hearing loss.

Even though physicians are asked to support many programs, I believe that another rehabilitation program is worth while. Rehabilitation of the deaf is just as important to the future welfare of North Carolina citizens as is aid to the blind, the lame, the crippled, and patients with cardiac disease, tuberculosis, or cancer. Profoundly deaf people

<sup>(1)</sup> Read before the Section on Ophthalmology and Otolaryngology, Medical Society of the State of North Carolina, Pinehurst, May 3, 1950.

From the Department of Surgery, Division of Otolaryngology, Duke University, Durham, North Carolina.

become a financial burden, and withdraw from society economically and socially.

Twenty-three communities in North Carolina are now listed as having some sort of screening program in which audiometer tests are given by teachers, public health nurses, or school nurses. Briefly, the statewide program might be set up as follows:

1. Routine hearing tests of our entire school population should be made.
2. Those with hearing deficits, apparent or real, should be referred to their doctors for appropriate advice and treatment.
3. Training and amplification should be provided where treatment is of no avail.
4. Any adult who wants to have a hearing evaluation should have an opportunity to do so.

### *Etiology*

#### *Conduction deafness*

The conductive apparatus consists of the external auditory canal, drum, ossicles, middle ear, and eustachian tube. Conduction deafness is caused by impairment of some part of this apparatus; the nerve is normal in this type of deafness.

Conditions which may cause impairment of sound conduction are (1) otitis media; (2) obstruction of the external auditory canal, such as might be caused by swelling, wax, foreign bodies, or anatomical abnormalities (traumatic or congenital stenosis); (3) obstruction of the eustachian tube by adenoids, swelling, aerotitis, or tumors; (4) mastoiditis; and (5) otosclerosis.

#### *Nerve (or perception) deafness*

In this condition the conductive apparatus is normal, but the organ of Corti or nerve endings are deficient or non-functioning. Nerve deafness may be either congenital or acquired. In *congenital* nerve deafness the tonal loss may be partial or total. Patients with total tonal loss are deaf mutes. *Acquired* nerve deafness may be caused by acoustic trauma (noise from motors, gunfire, trains, radio signals, and so forth); by infections such as measles, mumps, scarlet fever, and meningitis; by drugs such as quinine, aspirin, streptomycin, and lead; or by senile degeneration of the organ of Corti or the nerve endings.

### *Diagnosis*

#### *History*

Patients with *conduction* deafness hear better in a noisy than in a quiet room, and usually hear fairly well over the telephone.

Tinnitus is usually, though not always, present. A history of earache may be obtained. Frequently the patient says that he feels as if he is "talking out of the ear."

Patients with *nerve or perception type* deafness hear better in a quiet room, and hear poorly over a telephone or when two or more people are talking. There is pre-existing history of ear disease, and no pain.

A familial history of deafness may be obtained in either type of deafness.

### *Examination*

When the hearing loss is of the *conduction* type, examination of the canals may be negative or may show some pathologic condition causing obstruction. The drums may be scarred, retracted, perforated, or absent. Examination of the middle ear may show distortion, swelling, and purulent or serous fluid. The eustachian tubes may be obstructed, either in the nasopharynx or by swelling between the eustachian tube orifice and the middle ear. The Weber test using a number 256 tuning fork shows the sound to be heard best by the affected ear. A Rinne test done with the number 512 fork gives variable results. Air conduction and bone conduction may be equal, or one may be slightly greater than the other, depending upon the degree of obstruction. Audiograms will show the hearing loss to be greater in the low tones. If no nerve involvement is present, the hearing gradually ascends to normal as the high tones come in.

Examination of patients with the *perception* type of hearing loss shows the canals, drums, middle ear, and eustachian tube to be normal. With the Weber test, the sound is heard best by the good ear. A Rinne test shows air conduction to be better than bone conduction, but the time is markedly shortened. Audiograms show that the patient is able to hear the lower tones, but begins to have difficulty with tones above 2,000 cycles per second. The highest tones of 6,000, 8,000, and 10,000 cycles are frequently not heard at all.

### *Treatment*

#### *Conduction hearing loss*

The treatment of conduction deafness depends upon the cause. *Otitis media* may be treated by chemotherapy, myringotomy, and inflation of the eustachian tube. The use of nose drops is questionable.

Deafness which is due to *obstruction of the external auditory canal* should be treated by



removal of the obstruction. If the obstruction is in the *eustachian tube*, adenoidectomy or inflation may be of value. The use of radium applicators or roentgen therapy is controversial. It has been helpful in some cases, but I do not believe it is as beneficial as the literature would lead one to believe.

If *mastoiditis* can be treated by simple mastoidectomy, a good deal of the hearing, if not most of it, can be preserved. The radical mastoidectomy causes some diminution in the amount of hearing. If the hearing in both ears is below conversational limits, the patient who has had a radical mastoidectomy may be helped by an ear drum prosthesis or a hearing aid.

*Otosclerosis* can be treated by a fenestration operation if the patient meets all the prerequisites. These are as follows:

1. No history of previous middle ear disease
2. An intact drum
3. Bone conduction better than air conduction for the number 512, 1024, and 2048 tuning forks
4. By audiogram, bone conduction above the critical 30 decibel level from 256 through 4,000.

Patients who do not meet the above requirements, and even those who do, will get along splendidly with the use of a hearing aid.

#### *Nerve (or perception) hearing loss*

The prognosis in this condition is not quite so good, as no specific treatment is yet known. Hence, such patients must be given the benefit of training, either at home or in schools for the deaf child, and of amplification of sound by hearing aids or devices available for use in movie theaters or on telephones or radios.

#### *Conclusion*

In many cases impairment of hearing can be greatly reduced. When such an improvement is impossible, rehabilitation of the patient can be begun at an earlier age than is now being done. Accomplishment of this objective involves a screening program with cooperation from the North Carolina public school system and state health agencies.

Diagnosis and treatment are the responsibility of the physician, who must advise his

patients with various types of hearing loss as to the best procedure to follow.

#### *Discussion*

**Dr. B. W. Armstrong (Charlotte):** Dr. Arnold has presented a pertinent and concise review of the present status of hearing loss, its diagnosis and treatment. In many instances deafness is unavoidable, but a substantial number of cases are preventable or remediable. It is this latter group that would benefit most from a state-wide screening program. I am in full agreement with Dr. Arnold's recommendations as they apply to school children. However, I do not agree with the suggestion that such a program be extended to adults. We have in North Carolina ample facilities for the diagnosis and treatment of adults seeking advice in regard to hearing disorders. They are being cared for as private patients by their local otologists, and those unable to pay for such care are handled through the North Carolina Rehabilitation Service. Except for an educational program, this service should be adequate. I would not like to encourage state medicine by the extension of a screening program to include adults.

I would suggest instead that we direct our attention to the pre-school child. It is in this group that we encounter the greatest incidence of remediable deafness. Except for otosclerosis and senile changes, all of the causes of deafness which Dr. Arnold discussed may develop during the pre-school years. Many of these children, because of the ignorance of their parents, do not receive proper treatment. We all see children with hearing loss who have been neglected, and it is not unusual for the parents to say that they did not realize the seriousness of the condition. Many deaf children are thought to be behavior problems, or simply children who "don't want to hear."

One of the most common causes of hearing loss in children is chronic non-suppurative otitis media (secretory otitis media). This may occur with or without a previous ear infection. I believe this is the most commonly overlooked of all causes of hearing loss.

The importance of early diagnosis of hearing impairment can not be overemphasized. Nearly, if not all, acquired conduction deafness in children is remediable if treatment is not delayed. The early detection of perception deafness will enable parents to undertake home training during the pre-school years. In some instances these children will be able to attend regular public school instead of having to go to a special school for the handicapped.

We all stress early diagnosis. To accomplish this, we must first promote public education. We are familiar with programs designed to acquaint the public with other medical problems, but there is no organized effort to disseminate information in regard to deafness. A few popular articles have appeared in lay publications, but there remains much to be done. We can not hope to reduce materially the incidence of deafness when the public is not aware of the social and economic hardships imposed by this condition. The more spectacular disabilities, such as heart disease, poliomyelitis and blindness, are supported by annual campaigns to which large sums of money have been donated. I fear, however, that any one of us would fail dismally in soliciting funds for the hard-of-hearing, as long as people are so poorly informed. I would therefore urge a program to familiarize the public with the broader aspects of the problem of hearing loss, and I suggest that we direct our efforts toward the diagnosis and treatment of deafness in the pre-school and school child.

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### THE AMERICAN MEDICAL EDUCATION FOUNDATION

A most effective reply to the charge that the American Medical Association is doing nothing to help medical education was the action of the Board of Trustees in appropriating a half million dollars as the nucleus of a fund for the aid of medical schools. The announcement—made at the Cleveland session of the House of Delegates—was enthusiastically received. The next step was the incorporation of "The American Medical Foundation," with a board of 11 directors chosen from the trustees and officers of the A.M.A., and the Council on Medical Education and Hospitals. The board is represented by Drs. Louis H. Bauer, Gunnar Gundersen, Edwin S. Hamilton, and Walter B. Martin; the officers, by Drs. Elmer L. Henderson, George F. Lull, and J. J. Moore; and the Council, by Drs. H. G. Weiskotten, Harvey

B. Stone, Victor Johnson, and Donald G. Anderson.

The purposes of the organization are:

"To promote the art and science of medicine and the betterment of public health by providing or aiding in the providing of financial aid to recognized schools or institutions of medical education responsible for the education and training of the medical manpower of the United States;

"To distribute funds, monies or contributions to medical schools and institutions;

"To determine the need of eligible medical schools or institutions for contributions;

"To determine the amount, manner and conditions in which and under which available funds will be distributed or granted to eligible schools or institutions."

Secretary Lull's letter of January 2 states emphatically that "When the funds are distributed to the medical schools there will be no strings attached."

The half million dollars appropriated is intended only as the nucleus of a much larger amount to be raised by physicians and the friends of medicine. An editorial in the *Journal of the American Medical Association* (January 20) truly says: "Almost every physician now practicing received his medical education for less than it cost his medical school . . . Furthermore, the medical profession has traditionally accepted a large measure of responsibility for the training of the continuing flow of young physicians. It is to be expected, therefore, that all physicians, regardless of the other contributions they may have made to society, will want to share in making the foundation a success."

It is true that innumerable worthy causes are asking for donations nowadays, in addition to the growing burden of taxes. A gifted minister once preached a notable sermon on the subject, "A Conflict of Rights," in which he pointed out that it was much harder to choose between two right things than between a right and a wrong. One can only let his conscience be his guide in deciding where to draw the line. It is hard to think, however, of a cause which should be dearer to the heart of a doctor than that of maintaining the high standard of American medical education unhampered by bureaucratic control, and of keeping it free from any entangling alliances with politicians.

\* \* \*



## DR. MAGNUSON OUSTED AS MEDICAL DIRECTOR OF THE VETERANS ADMINISTRATION

When General Bradley took over the administration of the Veterans Administration and appointed Dr. Paul Hawley as medical director, it was thought that a new day was dawning for the V.A., especially the medical care program. Dr. Hawley selected Dr. Paul Magnuson to help him with the job, and the two doctors, with the backing of General Bradley, accomplished wonders in making the V.A. medical program really respectable. For the first time in history young doctors were not ashamed to say that they were on the staff of a V.A. hospital. When Dr. Hawley retired in 1948, Dr. Magnuson was appointed as his logical successor.

Then came the change in lay administrations, when General Bradley was replaced by General Carl Gray, Jr. Dr. Magnuson was more and more handicapped in his work as medical director. Their differences became so great that General Gray, after trying to goad Dr. Magnuson into resigning, ousted him from the post. That a medical man of Dr. Magnuson's proven ability and professional stature should be forced to bow to a layman ignorant of the ABC's of medical standards is a sad reflection upon our form of government.

Vice-Admiral Joel T. Boone, who has been appointed to succeed Dr. Magnuson, is a splendid gentleman and a capable executive. It is to be hoped that he will succeed in halting what Dr. Magnuson has characterized as a "general back-tracking to the inefficient system" of a decade ago. It may be recalled that even such a staunch advocate of socialized medicine as Albert Deutsch said of the system before Drs. Hawley and Magnuson took over: "The quality of medical care is usually so low that the facilities have been termed the 'backwaters of medicine,' where doctors and patients stagnate in common . . . the medical policy of the VA is under the rigid control of laymen . . . This plays havoc with the system, demoralizing the doctors already in it, frightening good ones away from participation, and making cynics and routineers of those who do enter the system and stay."<sup>(1)</sup>

To Dr. Magnuson, this journal extends heartiest commendation for accomplishing so much against such great odds. To Dr. Boone, best wishes for success in a difficult assign-

ment, and the sincere hope that he will not become another human sacrifice upon the altar of the great American God of Bureaucracy.

1. Deutsch, Albert: Federal Medicine Advocate Shocked by V.A. Program, *Medical Economics* 22:7:53-55 (April) 1945.

\* \* \*

## ACUTE ABDOMINAL PAIN

An article by Dr. Dean MacDonald in the *Canadian Medical Association Journal* for January, 1951, presents a splendid example of clinical research. Two hundred consecutive cases of acute abdominal pain are subjected to a critical analysis, with the emphasis placed upon 35 cases (17.5 per cent) not correctly diagnosed. In 16 of these cases no diagnosis was made; in 19 the diagnosis was wrong. Dr. MacDonald commented that only one of these 19 wrong diagnoses was unavoidable, and that "not a single mistake was due to the actual difficulties in a case. The chief cause of making a mistake was incomplete investigation. Of much importance, also, is the wrong interpretation of correct findings." Other causes of wrong diagnoses listed were "ignorance, errors in judgment, obsessions, failure to think anatomically, failure to think at all."

Among the 19 cases with wrong diagnoses, there were three fatalities. One of these—from strangulated inguinal hernia, in which operation was delayed—might have been avoided had the condition been recognized earlier. In spite of the wrong diagnoses, the therapy in 7 of the 19 cases was right; in 12 it was wrong.

In 48 of the 200 patients the origin of the pain was outside the abdomen; in 141, inside the abdomen; and in 11 the origin was undetermined. Of the 141 patients with pain originating within the abdomen, 72 required medical treatment; only 69 required immediate surgical therapy.

Other pertinent observations were that the majority of the mistakes concerned, and every preventable death followed small bowel obstruction; that the "present history was satisfactory in 95 per cent of the cases; the past history . . . was of diagnostic aid in 75 per cent of the cases"; and that "approximately 50 per cent of the deaths were preventable."

Such a careful and honest record of experience as Dr. MacDonald has made is a real contribution to medical progress.

\* \* \*

## HAPPY BIRTHDAY TO DR. CLARENCE SMITH!

One of the most popular members of the fraternity of state medical journal editors is Dr. Clarence A. Smith, editor of *Northwest Medicine*, the official journal of the Medical Associations of Oregon, Washington, Idaho, and Alaska. It is hard for those who have seen Dr. Smith from time to time over the years to realize that January 24 was the ninetieth anniversary of his birth. He is one of those fortunate ones on whose brow time sits lightly, and who continues to live in the present and to look to the future instead of to the past.

As *Northwest Medicine* begins its fiftieth year, and its editor his ninety-first, the NORTH CAROLINA MEDICAL JOURNAL extends across the continent heartiest congratulations and best wishes for happy birthdays for both the journal and Dr. Smith.

\* \* \*

## THE STUDENT AMERICAN MEDICAL ASSOCIATION

An important meeting was held at the American Medical Association headquarters in Chicago on December 28 and 29, when student delegates from forty-eight medical schools in the United States met to organize the Student American Medical Association. This organization is the outcome of a resolution passed by the House of Delegates at the San Francisco session, and is intended to acquaint students during their undergraduate days with the advantages of belonging to the parent organization.

The meeting was marked by enthusiasm on the part of those in attendance. Warren R. Mullen of the University of Michigan was elected president. Leo E. Brown of Harrisburg, Pennsylvania, is the executive secretary, and will have his headquarters at the A.M.A. building in Chicago. Each medical school may have one society, and the student House of Delegates will be made up of delegates from the various medical schools. It is contemplated that at the Atlantic City session of the House of Delegates next June the constitution will be amended to provide for two members from the student House of Delegates to serve as their representatives in the senior body.

It is hoped and expected that this action will be of mutual advantage to both students

and practitioners, as they consider together their mutual problems.

\* \* \*

## MEDICAL CARE IN THE STATE HOSPITALS

A committee was recently appointed by the Medical Advisory Committee to the State Hospitals Board of Control to further the program for better medical care to the State Hospitals. Dr. Maurice Greenhill, chairman of the committee, has prepared the following statement for distribution.

"In keeping with its goal to provide good medical and psychiatric care for patients in the state hospitals, the Hospitals Board of Control has requested of the Legislature an increase in budget for the next biennium which includes a psychiatric wing at the University Medical School at Chapel Hill, increases in salaries for state hospital physicians which would bring salary levels close to those of other states, and a training program so that the State might train its own psychiatrists to insure staffing of state hospitals. The Advisory Budget Commission cut these requests, as well as increases asked for related to salaries for nurses and attendants, food, Merit salary increments, major repairs, and permanent improvements.

"Dr. David A. Young, General Superintendent of the Hospitals Board of Control, states, 'In the face of rising living costs and increased competition with industry and the armed forces, I am afraid we will not be able to hold our present medical staffs and other trained personnel.'

"Representative John Umstead, of Orange County, has introduced two bills to counteract this effect: HB No. 39, a bill for \$200,000 for the adjustment of salaries for state hospital physicians and for the training of personnel providing professional care of patients; and HB No. 40, a bill for \$775,000 for the psychiatric wing at the University Medical School at Chapel Hill. We urge that the State Medical Society, through its Executive Committee and Journal, and each county medical society encourage physicians everywhere in the State to impress upon their local representatives in the State Legislature the importance of supporting bills HB No. 39 and 40 for the sake of appropriate medical care for the ten thousand patients in the state hospitals. The present low salaries for physicians makes it impossible to provide enough doctors or enough equipment and drugs for those few physicians available to give even minimal medical care to state hospital patients. This situation has resulted in a level of medical care which no individual physician would tolerate in his own practice."

The only comment needed for this statement was furnished by Dr. George Carrington, another member of the committee:

"About all that I could add to this prepared statement is to emphasize the fact that without greatly increased attractions for staff and greatly increased chances for training of the staff, about the only thing the present set-up can do is to give the inmates custodial care. That means they will get little in the way of therapy and, so far as recovery goes, will remain almost entirely in the hands of the Lord without any assistance from us."

\* \* \*



## THE ANTIHISTAMINES AND THE COMMON COLD

In the third and possibly the best of the stimulating Dunham Lectures given at Harvard in November, 1949, Dr. C. H. Andrewes concluded with the statement, "Almost everyone has his own foolproof technic for preventing or curing colds; yet colds are as numerous and as troublesome as ever."<sup>(1)</sup> As if in answer to Dr. Andrewes, only a few days later the *Reader's Digest* for December, 1949, came off the press with an article by Paul de Kruif entitled "Is This, at Last, Good-bye to the Common Cold?" "Dr." De Kruif strongly suggested an affirmative answer to his rhetorical question by stating that a cold might be aborted if the victim would take one of the antihistamines at the onset of his cold, and avoided altogether if one would take an antihistamine tablet daily.

De Kruif's article was based chiefly upon poorly controlled trials of antihistamines by Brewster and by Arminio and Sweet. Since then a number of carefully controlled trials of the antihistamines in treating the common cold have been conducted. One of the first was by a special committee of the Medical Research Council of Great Britain. In one experiment half the volunteers were given antihistamine tablets, and the other half "dummy" tablets forty-eight hours before and seventy-two hours after being inoculated with cold virus. Colds developed in exactly half of each group. In a clinical trial of a much larger group of individuals, it was demonstrated that "this antihistaminic drug had little if any value in the treatment of the common cold."<sup>(2)</sup>

Another similar trial was conducted by Feller and others at Western Reserve, and the conclusion reached that "No beneficial prophylactic or therapeutic effect was demonstrated."<sup>(3)</sup> In Sweden, Dr. G. Bergquist gave antihistamine and inert tablets to 594 patients, alternately. For those who had symptoms less than six hours the recovery rate with the inert tablets was 48.2 per cent, and only 40.5 per cent for those getting the antihistamine. In those with symptoms from six to twelve hours, the placebo group again fared better, with a recovery rate of 22.8 per cent as compared with 20.9 per cent for those given antihistamine<sup>(4)</sup>.

In spite of this overwhelming weight of evidence, "Dr." De Kruif announces in the *Reader's Digest* for February that "Science Vindicates Antihistamines." He conveniently forgets or fails to read the reports unfavorable to his viewpoint, or he could not, with intellectual honesty, have said that "None of these tests was limited to the first symptoms of colds."

It must be admitted that the extensive publicity given the antihistamines for treating the common cold has had at least one decidedly beneficial effect—upon the incomes of their manufacturers. Thanks largely to the *Reader's Digest*, the sales of these products have brought in millions of dollars. Already the daily papers and the radio are beginning to carry such announcements as "NOW AGAIN *Reader's Digest* REPORTS OVERWHELMING MEDICAL EVIDENCE FOR ANAHIST!"<sup>(5)</sup>

It is to be hoped that "Dr." De Kruif will read Dr. Andrewes's stimulating lecture on the common cold, especially the statement, "... even the most eminent men of science almost invariably lose all sense of critical judgment when colds and especially their own colds are concerned." And when an "eminent man of science" is well paid for writing sensational pseudoscientific articles, it is but natural that he should select subjects with wide reader appeal. It is unfortunate, however, that such articles as the *Reader's Digest* publish for him should cost the American public so much money for so little value.

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3. *New England J. Med.* 242:737-741 (May 11) 1950.
4. Letter from Sweden, *J.A.M.A.* 145:48 (Jan. 6) 1951.
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### EDITORIAL IN NINE WORDS

"The 1948 infant mortality rate for the United States was the lowest on record according to figures released today by Federal Security Administrator, Oscar R. Ewing." (From the FSA release dated March 27, 1950.)

Is this the system Mr. Ewing wants to change?

Reprinted from the *Journal of the Medical Society of New Jersey* 47:192 (May) 1950.

## Committees and Organizations

### PUBLIC RELATIONS COMMITTEE

#### THE HUMAN SIDE OF THE PRACTICE OF MEDICINE

W. L. PRESSLY, M.D.\*

DUE WEST, S. C.

I esteem it an honor to be asked to contribute an article to the NORTH CAROLINA MEDICAL JOURNAL. To comply with this request has been made a pleasure by the suggestion of your Director of Public Relations that I write on "The Human Side of The Practice of Medicine." I accept this suggestion gladly, for, after all, our work is with human beings.

As I grow older in years and in the practice of medicine—and, I trust, more mature in thought and judgment—I am thoroughly convinced that, as members of the medical profession, our lives must be devoted to service. Wherever and whenever possible, we are to bring relief to the suffering, renewed hope to the cheerless, and courage to the faint of heart. There is no hour that we are exempt from this high call. The men of our profession whom we have delighted to honor through the generations have blazed a path for us by long hours and hard work. There can be no substitute for these. Scientific skill and sympathetic care of the sick should ever walk hand in hand. No medical care, however skilled, can be rendered effectively without love and sympathy.

An aged woman came in my office a few days ago. I was not the first doctor she had consulted. As she sat down, I asked, "What seems to be bothering you today?" To this she replied, "I told the doctors, but they wouldn't pay no 'tention to me." After listening to her story, I gave her a thorough examination. She had no physical disorder. All she needed was a sympathetic listener to rid her mind of certain fears.

This is no isolated case. Last year we made a careful study of the patients who came to our office during a certain week. As a result of this study we found that 26 per cent of these patients could be classified with this old woman. During the strenuous days before us, this percentage may even be increased. I have related these incidents simply to emphasize that as general practitioners we must

take time to give a sympathetic hearing to that which seems so important to the patient. Thus we may be guided to the proper treatment.

In full appreciation, then, of all the scientific preparation our medical colleges afford, the advantages derived from internships and gained from occasional clinics, and in appreciation of the services rendered through community, county, state, and federal medical agencies, I want to bring to your attention afresh that phase of medicine which deals with the human being at the point where mind and matter meet.

The swift spread of psychiatric clinics throughout our land, and the recent development of religious cults dealing with mental states indicate that doctors need to be far more than peddlers of pills. In a world where emotional pressures abound, as in this tragic hour of contemporary history, we doctors need to be equipped to enter every sickroom and every hospital ward, remembering that Macbeth's question rises in the heart of many a patient:

Can'st thou not minister to a mind diseased,  
Pluck from the memory a rooted sorrow,  
Raze out the written troubles of the brain,  
And with some sweet oblivious antidote  
Cleanse the stuffed bosom of that perilous  
stuff

Which weighs upon the heart?

Scientific therapy for such a burdened heart is insufficient. Such distress has its origin in no functional disorder, nor does it result always from the invasion of the body by deadly germs. It is, rather, a condition made clear by the truth of Milton, who wrote in his blindness:

The mind in its own place, and in itself  
Can make a heaven of hell, a hell of heaven.

What answer can we give to the man who sits, chin in hand, like Rodin's "Thinker," and ponders, in the words of Hamlet, "To be or not to be, that is the question." To all of us there comes such an hour. This fact should enable us to approach every bedside in the spirit of the ancient prophet who declared, "I sat where they sat."

This sympathy is of greatest importance, since often we must deal with conditions which no physical therapy can ever touch, involving problems which no microscope can diagnose and no scalpel remove. They are conditions which flit like shadowy spirits, veiling life's outlook, dulling life's hope, subduing life's courage. Such a condition demands a healing deeper than the physical. Adequately to meet the need, we should walk

\* Selected by the American Medical Association in December, 1948, as General Practitioner of the Year.



in fellowship with Him who is the Great Physician. By His gentleness, patience, and understanding sympathy, as well as by His divine power, He brought to the multitudes who sought His healing ministry hope and courage and the will to live. It is likewise our privilege—and should be our holy ambition—to move among our patients as those whose happy hearts do good like a medicine, radiating, by our very presence, a spirit of confidence and hope which, more than many a medicine, brings new strength to atrophied sinews.

#### *From Birth to Death*

This ministry touches life at every stage, from swaddling clothes to shroud. The doctor is present at the moment when life emerges into conscious being, with all its attendant mystery and wonder. He is also present when life vanishes from the body, attended by equal mystery and awe.

#### *Youth*

Think what an understanding doctor can mean to the child as life unfolds and develops! From the vantage point of age and experience, look back upon the child as he stands at the threshold of life. He marvels at the disclosures of the world about him, as it grows larger and larger. Biologic advances within his growing structure fill him with wonder—sometimes with fear. For these advances are generally accompanied by new emotional experiences, new intellectual adventures, new social adjustments. Bewildered by it all, without the steadying and guiding hand of an understanding friend, the child may conclude that life is a toy to be played with, rather than a set of forces and impulses to be wisely governed and consecrated to high endeavor. Such a conclusion would invite shipwreck before the sails are well unfurled, and would transform what might have been a glorious voyage into a holiday tragedy.

#### *Maturity and old age*

Surely, then, we should not underestimate the importance of wholesome association and counsel with youth. Only thus can we help to guarantee to life, in its meridian heat, the glow and power which belong to a noble maturity. Then, too, we may confidently anticipate an evening of stillness and peace, when

Time claims his tribute: silent now the lyre;  
The curfew bell reminds us—cover up the fire.

For it is in the evening of human experience, with its ever lengthening shadows, that

our ministry is greatly needed. The roseate hues of youth have faded. The tempests of middle life have abated. Stealthily, the wish to sit by the raked up ashes of the past and spread thin hands over the whitening embers asserts itself. Memory takes the reins, and reflection becomes the habit. In such a day medical science and surgical skill can contribute little. It is here, however, that understanding friendship and cheerful ministry yield an unfailing harvest of renewed hope and joy to the patient, and of love and gratitude to the doctor.

#### *Death*

Finally, do we have a ministry to offer when life approaches the inevitable separation of body and spirit, with all the hopes and fears that crowd such an hour? This is the period, as Holmes reminds us,

When the iron portal shuts behind us,  
And life forgets us in its noise and whirl,  
Visions that shunned the noonday find us,  
And glimmering starlight shows the gates  
of pearl.

Having attended life at its very beginning and ministered to it through all its fitful fevers, we must now understand that "they also serve who only stand and wait." To watch and wait in understanding sympathy in a dimly lighted room, while a stoical father beats back the surging tide of grief and a suffering mother stifles a sob, as together they await the child's last, quivering pulse—this, too, is to be a doctor. When all the healing virtues of medicine and surgery have done their best, this phase of medicine remains—and demands our most skilled and delicate ministry.

And may I now suggest that to be this kind of doctor brings one into the upper room of the medical fraternity and into fellowship with the immortals of our profession? In this room they lived and labored. Spurning ease and self-aggrandizement, they have walked in the footsteps of Him who came, "not to be ministered unto, but to minister," and whose desire for men was "that they might have life and that they might have it more abundantly."

But while, as we have said, this spirit characterized the immortals of our profession, we are quite sure that no doctor, however far short he may come in its realization, can be satisfied to cherish any lower ideals for himself. To us these stalwarts call, "Friend, come up higher." In this day of the world's agony and distress may we, one and all, heed the call.

Then, when we have served our own generation with all the scientific wisdom known to us; when we have extended our ministry into the inner sanctuary of man's being, may we recall with Kipling these lines of expectation:

When earth's last picture is painted, and the tubes are twisted and dried,  
When the oldest colours have faded, and the youngest critic has died,  
We shall rest, and, faith, we shall need it—lie down for an aeon or two,  
Till the Master of all good workmen shall set us to work anew!  
And only the Master shall praise us, and only the Master shall blame;  
And no one shall work for money, and no one shall work for fame;  
But each for the joy of the working, and each, in his separate star,  
Shall draw the thing as he sees it for the God of things as they are!

## CORRESPONDENCE

To the Editor:

I was very much interested in your editorial on "Dramamine versus Hyoscine" in the December number of the NORTH CAROLINA MEDICAL JOURNAL. My wife, who suffers from sea- and air-sickness has compared dramamine and hyoscine on several occasions, and finds the latter is much more effective. She uses the prescription that was worked out during the War for the Air Force, a copy of which I enclose.

Sodium amytal .....	64 mg. (gr.i)
Hyoscine hydrobromide .....	0.2 mg. (gr.1/300)
Atropine sulfate .....	0.15 mg. (gr.1/400)
Lactose, q.s. ad. ....	0.3 Gm. (gr.v)

Adult Dose: 1 capsule every 8 hours, starting 2 hours before departure.

With best wishes, I am

Yours sincerely,

Wilburt C. Davison, M.D., Dean  
School of Medicine  
Duke University

\* \* \*

To the Editor:

This spring will mark the eighteenth annual Easter Seal Sale to be conducted throughout the state by the North Carolina League for Crippled Children. As you probably already know, this appeal is held each year throughout the nation to provide the many special services handicapped children so desperately need.

In North Carolina these services include a public program as to the causes of crippling and preventive measures; financial aid to

handicapped persons for medical aid, transportation, appliances, etc., where money is not available through existing agencies; helping establish facilities for treatment and training cerebral palsied children; and cooperating with the Department of Public Instruction in providing facilities for special education classes and training teachers of handicapped children, as well as many other services . . .

We are appealing to you for assistance in publicizing the 1951 Easter Seal Sale, since 91.7 per cent of all funds raised in the state will be retained here to develop our county services and, we hope, expand existing services.

The 1951 Easter Seal Sale opens Sunday, February 25 and closes Easter Sunday, March 25 . . . May we thank you in advance on behalf of North Carolina's and the nation's handicapped and crippled children who will be given an opportunity to lead a more normal, happier life through your generous assistance?

Cordially yours,

D. HIDDEN RAMSEY, *President*  
The North Carolina League  
for Crippled Children, Inc.



It costs money to help crippled children—money for services, for education, for research. Use Easter Seals.

\* \* \*

The handicapped deserve an opportunity to live normal, useful lives. You can help to give them that opportunity by using Easter Seals.

\* \* \*

Funds raised through Easter Seals support a year-round program of education, research and direct services for the nation's handicapped. You can help. Use Easter Seals.



## BULLETIN BOARD

### NEWS NOTES FROM THE DUKE UNIVERSITY SCHOOL OF MEDICINE

Leading surgeons from America's foremost medical schools met at Duke University February 8-10, for the twelfth Annual Meeting of the Society of University Surgeons, according to Dr. Deryl Hart, chairman of the department of surgery at Duke.

Some 150 members of the society, representing twenty-five medical schools, attended the three-day sessions. Membership in the group, which includes only 200 American surgeons, is limited to men of high academic rank in teaching institutions.

Forty-five technical papers covering a wide range of surgical interests were discussed. Among the subjects were hypertension, neuritis, cancer, ulcers, skin grafting, burns and wounds, anesthesia, and a host of other conditions and their surgical applications.

On the opening day twenty-five papers were presented by Duke physicians, surgeons, and scientists. Presiding in the morning was Dr. Hart. Dr. Clarence Gardner, Jr., professor of surgery, presided over the afternoon meeting. Presiding officers for the Friday morning and afternoon and Saturday sessions were Dr. Joseph W. Beard, professor of experimental surgery; Dr. Kenneth Pickrell, professor of plastic surgery; and Dr. Keith S. Grimson, professor of surgery. All five are members of the society.

Featured speaker at the annual dinner meeting Friday night was Dr. Jean Stevenson, of Cincinnati, president of the society.

These medical teaching institutions were represented at the meeting: California, Johns Hopkins, Duke, Vanderbilt, Albany Medical Center, Cincinnati, Harvard, Illinois, Michigan, Emory, Washington, Cornell, Stanford, Virginia, Yale, Rochester, Tulane, Kansas, Chicago, Pennsylvania, Minnesota, Columbia, Iowa, and Ohio State.

### NEWS NOTES FROM THE UNIVERSITY OF NORTH CAROLINA SCHOOL OF MEDICINE

A grant of \$3,500 has been made to Drs. J. Logan and Elinor Moore Irvin, of the Department of Biological Chemistry, by the Research Corporation, of New York, for the support of a research project on "The Isolation and Physico Chemical Characterization of Nucleic Acids and Nucleoproteins; Interactions with Acridine and Quinoline Derivatives."

\* \* \*

Dr. A. T. Miller, Jr., spoke to the staff of Mercy Hospital in Charlotte on "Obesity as a Medical Problem" at its January meeting.

\* \* \*

Dr. K. M. Brinkhous and Dr. John H. Ferguson participated in the fourth annual Josiah Macy, Jr., Conference on Blood Clotting and Allied Problems held on January 22 and 23 in New York City.

\* \* \*

Dr. John H. Ferguson was invited to participate in a series of seminars on "Blood Cells and Plasma Proteins, Their State in Nature" at the Harvard University Laboratory of Physical Chemistry Related to Medicine and Public Health; he spoke on "The Components of Human Blood Concerned with Coagulation" on February 8.

\* \* \*

Dr. Jessica H. Lewis and Dr. A. T. Miller, Jr., of the Department of Physiology, attended the meetings of the Southern Society for Clinical Research, which met jointly with the Southern Section of the Society for Experimental Biology and Medicine in New Orleans on January 25 through the 27. Dr. Lewis presented a paper on "Activation of Dog Serum Profibrinolysin by a Purified Lung Protein and by Staphylokinase."

\* \* \*

Dr. H. William Scott, Assistant Professor of Surgery at Johns Hopkins University School of Medicine, spoke to the faculty and student body on "The Effects of Alteration of the Pulmonary Arterial Circulation on Experimental Tuberculosis" on February 7.

### NEWS NOTES FROM THE BOWMAN GRAY SCHOOL OF MEDICINE OF WAKE FOREST COLLEGE

Dr. Eben Alexander, assistant professor of surgery, will present a paper on "Glomus Jugularis Tumor" at the meeting of the Southern Neurosurgical Society in New Orleans, Louisiana, on February 9 and 10.

\* \* \*

Dr. H. H. Bradshaw, professor of surgery, discussed voluntary health plans at the meeting of the Auxiliary of the Guilford County Medical Society at Sedgfield on January 23.

\* \* \*

Dr. Frank R. Lock, professor of obstetrics and gynecology, presented four lectures at the fifteenth annual meeting of the International Postgraduate Assembly of Southwest Texas held in San Antonio, January 23-25. His subjects were: "Management of Prolonged Labor," "The Responsibility of Physicians in the Management of Premature Labor," "The Diagnosis and Treatment of Oliguria or Anuria Complicating Pregnancy," and "The Diagnosis and Treatment of Functional Pelvic Disease."

\* \* \*

Dr. Robert L. McMillan, associate professor of clinical medicine, served as chairman of one of the groups participating in the 1951 Heart Conference held at Chapel Hill on January 20. Dr. Harold D. Green, professor of physiology, and Dr. C. C. Davis took part in the panel discussion.

\* \* \*

Dr. George T. Harrell, Jr., Dr. Jerry Aikawa, and Dr. W. E. Cornatzer will serve as lecturers for a course on radioisotopes in medicine to be offered by the Oak Ridge Institute for Nuclear Studies at Oak Ridge, Tennessee, February 5-16. Dr. Harrell's subject will be "Intra- and Extra-Cellular Spaces"; Dr. Aikawa will discuss "Techniques of Fluid Space Measurements"; and Dr. Cornatzer's subject will be "General Principles of Phospholipide Synthesis." Dr. Harrell and Dr. Aikawa are in the department of internal medicine. Dr. Cornatzer is in the department of biochemistry.

\* \* \*

Papers on which various doctors from the Bowman Gray staff collaborated formed the basis for the leading article in the December 30 issue of the *Journal of the American Medical Association*. Subject of the editorial was "Action of Lipotropic Substances in Liver Disease as Measured by Radioactive Phosphorus," and among those whose work contributed to it were: Dr. Camillo Artom, Dr. William A. Wolff, Dr. George T. Harrell, Jr., Dr. David Cayer, and Dr. W. E. Cornatzer.

\* \* \*

Marcus Gulley, senior medical student, attended a meeting in Chicago, Illinois, in December, which was called for the purpose of forming a Student American Medical Association. Forty-seven medical schools sent representatives to discuss the plan for junior affiliates of the A.M.A. Bowman Gray students will vote on the question of becoming charter members of the organization.

### NORTH CAROLINA LEAGUE FOR CRIPPLED CHILDREN

Helping crippled children to new lives in which they can realize their full, individual potentialities is the happy, though complex, objective of one of our nation's greatest causes—that of the National Society for Crippled Children and Adults. The National Society and its affiliates are banded together in a working federation dedicated to finding the crippled, discovering new ways of restoring them to usefulness, and assisting and supplying the services needed to make them constructive, well-integrated members of a progressive and energetic society.

To continue this vast program requires money, and lots of it. That is why once a year the American people are asked to help support this important work through the Easter Seal campaign. The 1951 Easter Seal drive opens Sunday, February 25 and closes Easter Sunday, March 25, and will be conducted in North Carolina by the North Carolina League for Crippled Children and its 100 county chapters. Everyone has an opportunity to participate in this month-long campaign by contributing and thus helping to finance those many direct services for the handicapped.

### NEWS NOTES FROM THE NORTH CAROLINA TUBERCULOSIS ASSOCIATION

#### Tuberculosis Death Rates Released

Tuberculosis caused an average of 1,042 deaths per year in North Carolina for the period 1945-1949, according to reports from the State Board of Health in Raleigh. The number of deaths and the death rates for each year of the five-year period are as follows:

Year	No. of Deaths	Death Rates
1945	1198	31.7
1946	1090	28.5
1947	1056	28.4
1948	908	23.9
1949	956	23.6

\* \* \*

#### NCTA Annual Meeting in Greensboro

The 1951 Annual Meeting of the North Carolina Tuberculosis Association and the North Carolina Chapter of the American Trudeau Society will be held in Greensboro, April 17 and 18, according to an announcement by Dr. S. B. McPheeters, chairman of the program committee. Headquarters for the meeting will be the O. Henry Hotel.

The tentative program includes a discussion of Case-finding Services, Community Approach to Tuberculosis Control, Seal Sale, Tuberculous Patient, Family and Community Education in the Public Health Section, and Differential Diagnosis of Pulmonary Diseases in Children, Geriatric Tuberculosis, Current Thought on Tuberculosis in Children and Physiotherapy and Chest Therapy in the Medical Section.

\* \* \*

### Seal Sale Report Shows Increase

With 102 out of 115 units heard from as of December 30, the grand total for the 1950 seal sale is \$345,383.38. Comparable figures for ninety-nine of these reporting units show an increase of \$35,010.16, or 11.4 per cent, over last year. Total sale in 1949 was \$386,865.98.

### NEWS NOTES FROM THE STATE BOARD OF HEALTH

Dr. John H. Hamilton, Director of the State Laboratory of Hygiene, unanimously was elected Assistant State Health Officer by the State Board of Health, in session here January 19. The meeting was held in the library of the Laboratory Building on Caswell Square, Dr. Grady Dixon of Ayden, presiding.

The Board also voted to take a definite stand on the matter of the location of the proposed new State Health Building. It was decided to ask the Legislature to raise the present appropriation from \$600,000 to \$950,000 for the erection of a building on the site of that now occupied by the Department. It was further voted to ask the State Board of Public Buildings and Grounds to take the proper action to have this new building named the "Cooper Memorial Health Building," in memory of the late Dr. George M. Cooper, who died December 18. The Board also adopted a resolution on Dr. Cooper.

During Friday's meeting, the Board approved the application of fluoride to public water supplies, "where there is strong demand and where the addition of fluoride is concurred in by the local Dental Society, the local Medical Society and the local or District Health Officer, providing approved procedures are strictly carried." It now appears established that such water treatment tends to reduce dental cavities among children.

### STATE BOARD OF MEDICAL EXAMINERS

The North Carolina State Board of Medical Examiners has announced the following schedule:

Interviews with applicants for licensure by endorsement of credentials—May 7, at the Carolina Hotel, Pinehurst.

Written examination—June 18-21, Sir Walter Hotel, Raleigh.

Interviews with applicants for licensure by endorsement of credentials—June 19.

### JOHNSTON COUNTY MEDICAL SOCIETY

The Johnston County Medical Society held its first meeting of the year on January 10 at Four Oaks. About eighty per cent of the members attended the dinner and heard a talk on public relations by Dr. John S. Rhodes of Raleigh. The secretary reported that twenty-three of the twenty-four physicians who are active members of the society have paid their 1951 dues to the State Society and the American Medical Association. Fifty per cent of the honorary members have paid their A.M.A. dues. The society is composed of both doctors and dentists, the latter paying dues to their own state and national organizations.

### FORSYTH COUNTY MEDICAL SOCIETY

Dr. H. S. Willis of McCain addressed the Forsyth County Medical Society at a dinner meeting held in Winston-Salem on January 9. His subject was "Tuberculosis."



## NEWS NOTES

Dr. Claude A. Frazier has announced the opening of his office for the practice of pediatric allergy, at 403 City Building, in Asheville.

\* \* \*

Dr. Frank B. Gross, Jr., has opened his office for the practice of internal medicine, at 10 Vanderbilt Place, in Asheville.

\* \* \*

Dr. Norman L. Anderson (member of the American Trudeau Society, Fellow of the American College of Chest Physicians, and Diplomate of the American Board of Internal Medicine) has announced the opening of offices for the private practice of internal medicine and diseases of the chest, at 86 Victoria Road, Asheville.

## GEORGIA SOCIETY OF OPHTHALMOLOGY AND OTOLARYNGOLOGY

The Georgia Society of Ophthalmology and Otolaryngology will hold its annual meeting at the General Oglethorpe Hotel in Savannah, Georgia, March 2 and 3, 1951. Members and their guest are invited to make their reservations directly with the hotel. Registration fee for the lectures is \$20.00.

## NEW ORLEANS GRADUATE MEDICAL ASSEMBLY

The New Orleans Graduate Medical Assembly will hold its Fourteenth Annual Meeting March 5-8. The program will include lectures, a panel discussion on ACTH and cortisone, clinics, symposiums, clinicopathologic conferences, technical exhibits, round-table luncheon discussions, and many other features. The registration fee of \$15.00 should be sent to the New Orleans Graduate Medical Assembly, 1430 Tulane Avenue, New Orleans 12, Louisiana.

## EMORY UNIVERSITY SCHOOL OF MEDICINE

The director of postgraduate education of the Emory University School of Medicine has announced that a postgraduate course in cardiology will be held at the University, March 5-9. Application for enrollment should be made to the director, at 36 Butler Street, S.E., Atlanta 3, Georgia.

## AMERICAN COLLEGE OF SURGEONS

Beginning Monday morning, February 26, and continuing through Tuesday, February 27, at The Homestead, Hot Springs, Virginia, will be a Sectional Meeting of the American College of Surgeons embracing the entire southeastern region of the United States. Surgeons and members of the medical profession at large are invited to attend the sessions, which will begin Monday and Tuesday mornings with the showing of medical motion pictures, followed by scientific sessions. Dr. Claude C. Coleman of Richmond is chairman of the Hot Springs committee on arrangements.

## AMERICAN HEART ASSOCIATION

### Need for Heart Research Sharpened by Defense Emergency

According to an announcement by A. W. Robertson, Chairman of the Board of the American Heart Association, Research Fellowship Awards totaling \$173,800 have been granted to forty-one individuals. To encourage the development of new research skills, Mr. Robertson announced an additional award of \$17,400, to continue a training school for car-

diovascular investigators at Western Reserve University, Cleveland, under the direction of Dr. Carl J. Wiggers.

The Fellowship Awards are the first of this year's allocations from funds contributed by the American public during the 1950 Heart Campaign last February. They provide for studies to be made during the 1951-52 academic year. The 41 Fellows were selected from among 65 applicants. Among North Carolinians who will receive new or continued fellowship awards are: Dr. Wilfried Mommaerts of Duke University, Durham, North Carolina—biochemistry of muscular contraction; Dr. James F. Schieve, Duke University, Durham—homeostatic mechanisms regulating the arterial blood pressure; Dr. Jerry K. Aikawa, Bowman Gray School of Medicine, Winston-Salem—rheumatic fever; and Dr. Philip A. Khairallah of Duke University—biochemical studies on the contractile protein system of cardiac muscle.

## INTERNATIONAL ACADEMY OF PROCTOLOGY

The International Academy of Proctology will present its first teaching seminar on proctologic subjects, including the more recent developments, in the form of a symposium and round table discussion. The session will be held in New York City, April 7, 1951.

Registration for the seminar will be limited in number and open to licensed physicians who are members of the American Medical Association, state or county medical associations, and graduates of an approved medical school. Admission to the seminar will be by card only. Preference in registration will be given to those affiliated with the International Academy of Proctology.

For registration or further information communicate with Dr. William Lieberman, Chairman, Seminar Committee, International Academy of Proctology, 1819 Broadway, New York 23, N. Y.

## NATIONAL GASTROENTEROLOGICAL ASSOCIATION

The National Gastroenterological Association again takes pleasure in announcing its Annual Cash Prize Award Contest for 1951. One hundred dollars and a Certificate of Merit will be given for the best unpublished contribution on Gastroenterology or allied subjects. Certificates will also be awarded those physicians whose contributions are deemed worthy.

Contestants residing in the United States must be members of the American Medical Association. Those residing in foreign countries must be members of a similar organization in their own country. The winning contribution will be selected by a board of impartial judges and the award is to be made at the annual convention banquet of the National Gastroenterological Association in September, 1951.

Certificates awarded to other physicians will be mailed to them. The decision of the judges will be final. The Association reserves the exclusive right of publishing the winning contribution, and those receiving Certificates of Merit, in its official publication, THE REVIEW OF GASTROENTEROLOGY.

All entries for the 1951 prize should be limited to 5,000 words, typewritten in English, prepared in manuscript form, submitted in five copies, accompanied by an entry letter, and must be received not later than June 1, 1951. Entries should be addressed to the National Gastroenterological Association, 1819 Broadway, New York 23, N. Y.

### COMMISSION ON CHRONIC ILLNESS

Over twenty national health organizations are now participating in the preparation of authoritative summaries of what is now known about the prevention and early detection of arthritis and rheumatism, heart disease, cancer, poliomyelitis, multiple sclerosis, cerebral palsy, epilepsy, diabetes, blindness, deafness, tuberculosis, and syphilis. Statements are also being prepared on emotional disorders, heredity, occupation, and malnutrition as they may be related to the causation of chronic disease. These statements will be used at the National Conference on Chronic Disease: Preventive Aspects, March 12-14, 1951, at the Edgewater Beach Hotel in Chicago.

The Conference is being sponsored by the Commission on Chronic Illness in cooperation with the Public Health Service and the National Health Council. The national Commission was founded in 1949 by the American Medical Association, American Hospital Association, American Public Health Association, and the American Public Welfare Association.

National organizations contributing to the financial support of the Commission's work are the American Cancer Society, American Heart Association, American Medical Association, National Foundation for Infantile Paralysis, National Society for Crippled Children and Adults, Inc., National Tuberculosis Association, New York Foundation, and the Public Health Service.

### AMERICAN BOARD OF OBSTETRICS AND GYNECOLOGY

At a special meeting of the American Board of Obstetrics and Gynecology, held in Pittsburgh, Pennsylvania, December 14, 1950, the following changes in the regulations of the Board were unanimously adopted:

1. That physicians otherwise qualified, who were graduated before January 1, 1939 and whose required training was in obstetrics or gynecology alone, and who have confined their practice to obstetrics or gynecology for at least five years immediately prior to application be accepted for examination as candidates for certification in either obstetrics or gynecology. In all other respects requirements for eligibility remain the same for those physicians graduated since 1939. Bilateral training is required as published in the Bulletin of the Board.
2. Applicants who have been certified by one of the other American Specialty Examining Boards will not be eligible for certification by this Board until they have relinquished the certificate previously conferred.
3. Since the vast majority of obstetrical and gynecological cases are non-operative the Board requires adequate training in basic sciences, infertility, endocrinology, oncology, irradiation therapy, psychosomatic medicine, electrotherapy, and other non-operative methods of diagnosis and treatment as well as training in major operative procedures.

### TWENTY-THIRD ANNIVERSARY NUMBER OF THE HEBREW MEDICAL JOURNAL

The appearance of Volume 2, 1950, of THE HEBREW MEDICAL JOURNAL (Harofe Haivri), concludes the twenty-third successful year of its publication under the editorship of Moses Einhorn, M.D. Written in Hebrew, with English summaries, the Journal is a contribution to the development of

the Hebrew medical literature, and thus aids the newly established Hebrew University Medical School in Jerusalem.

In the medical section, among the articles of interest are "Surgical Treatment of the Painful, Stiff Hip—(The resection-angulation operation)" by Henry Milch, M.D.; "Electroencephalography and the Epilepsies" by Samuel J. Lipnitzky, M.D.; and an article by Dr. M. Temkin on the various infectious diseases which prevailed in Palestine, such as malaria, typhoid fever, pappataci and amoebiasis, and have lately been checked by the Health Department of the Government of Israel.

In the section "Old Hebrew Medical Manuscripts," Dr. Zussmann Muntner of Jerusalem presents a twelfth century manuscript on Diarrhea, by Abu'l Walid Ibn Rosh (Averroes, the Philosopher). In the section "Personalalia," are included biographical sketches on the well known Dr. David Israel Macht, on the occasion of the fortieth anniversary of his scientific research, and also on the life and work of the late physicians, Dr. Harry Friedenwald, Dr. Abraham J. Rongy and Dr. Nathan Ratnoff.

For further information, communicate with the editorial office of The Hebrew Medical Journal, 983 Park Avenue, New York 28, New York.

### HEART FUND CAMPAIGN

No finer gift could be made to an enemy of the United States than to abandon medical research at this time, especially in the field of heart disease, according to Dr. Howard B. Sprague, President of the American Heart Association. Dr. Sprague spoke recently on "Heart Disease and the National Emergency," in the first official nation-wide broadcast on behalf of the 1951 Heart Fund Campaign.

Dr. Sprague participated in a round table discussion in which Bruce Barton, author, advertising executive and chairman of the 1951 Heart Fund, served as moderator. Joining Dr. Sprague in the discussion was Dr. Howard A. Rusk, chairman of the Department of Physical Medicine and Rehabilitation of New York University—Bellevue Medical Center. The program was heard on the coast-to-coast network of the National Broadcasting Company, as an introductory feature on behalf of the month-long Heart Fund campaign which opened Thursday, February 1.

(BULLETIN BOARD CONTINUED ON PAGE 81)

### Classified Advertisement

#### ANNOUNCING THE OPENING OF A MANUSCRIPT CLINIC

**SERVICES:** Medical papers edited, re-organized, or rewritten; references checked and completed; tables arranged; manuscripts retyped.

**DIRECTOR:** Mrs. E. W. Jackson, assistant editor of the NORTH CAROLINA MEDICAL JOURNAL, 1940-1950.

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**RATES AND REFERENCES** given on request.

You can help support the program of your crippled children's society. Give the handicapped a chance. Use Easter Seals.



## AUXILIARY

### PUBLIC RELATIONS COMMITTEE

The best exponents of good public relations for any medical association are the members of the auxiliary to that association. How often has this statement been made, and how eternally true it is! When you want things done, give the task to the women and it will be accomplished with wisdom and dispatch. From all reports, this is now and ever has been true in North Carolina. It appears to us that the members of the Auxiliary to the Medical Society of the State of North Carolina are doing their bit toward improving the public relations of medicine. They have set their course, and they are determined to reach their ultimate goal.

When one of the officials of the Auxiliary asked me to write a few words of comment about that organization, I was pleased and flattered. My remarks, however, cannot be too specific, since my knowledge of their activities as yet is rather limited. Be that as it may, details are relatively unimportant to my thinking at this time. What is important is the fact that these ladies have a plan of operation and a willingness to perform a task. They are united in purpose and are producing results.

After all, no one is in better position than the ladies to promote the good will of the public. Through her daily contacts with neighbors and tradesmen, each doctor's wife has the chance to create an atmosphere of friendliness which can truly result in a feeling of warmth toward the doctor himself. Through her position of influence in the affairs of community life, her civic clubs and committee work, she is able to gain the understanding and sympathetic support of the men and women with whom she deals.

I am sure that each member of the Auxiliary realizes that in all organizations success, progress, and achievement are predicated upon continuity of effort. There must be a concerted drive to win friends. This task cannot be done in one week, one month, or even one year. Life simply does not work that way. It must forever be a part and parcel of each member's personal life—not for awards received but because such a philosophy of life is good and right. It brings happiness to the doer. It becomes the everyday habit of each member of the Auxiliary.

It appears that members of the Auxiliary, one and all, are eager not only to create more and more friends for medicine, but also to help these friends give tangible expression to their opinions. The task of securing resolutions opposing compulsory health insurance has been, I believe, a vital project in many of the Auxiliary chapters throughout the state. They have set themselves to this task with all the efficiency at their command.

Let me give you an example. I know of one member of the Auxiliary who sent to the Public Relations office ten resolutions opposing compulsory health insurance. And these resolutions came from a small town, not a large city. They came from all types of organizations—study clubs, the Kiwanis Club, the Business and Professional Women's Club, the Daughters of the American Revolution, Junior Chamber of Commerce, and others. This, I believe, is an excellent example of what can be done when the Auxiliary decides to perform a mission.

Some time ago I had the privilege of speaking to a group of officials of several women's clubs in a neighboring county. While there, I talked with the leader of the Auxiliary in that county. I was truly impressed with the progress which was being made in many and varied undertakings. These ladies had not narrowed their field to a single phase of operation. They had undertaken a wide and comprehensive program.

Some recent projects of county auxiliaries have been: scholarships for nurses; dissemination of information to high schools; award to the organization having the best educational program on voluntary health insurance; prize for the auxiliary procuring the greatest number of resolutions opposing compulsory health insurance; solicitations for funds for new hospital; help in reorganizing medical libraries; and an award for the District doing the most outstanding work.

I am told that study of national and worldwide affairs as they affect medicine constitutes one important phase of Auxiliary work. Members inform themselves by reading and discussion. Auxiliary meetings are built around noted speakers who discuss timely topics.

Furthermore, Auxiliary members have endeavored to make people in all walks of life more conscious of their responsibility as citizens of a free country. They have encouraged their neighbors to take advantage of the

rights of good citizenship and to be concerned about the affairs of their community, state, and nation. By joining forces with other organizations, they are endeavoring to make sure that an educated public understands the true meaning of American freedom.

It is my high hope that, as time goes on, I shall have the opportunity of meeting more of the ladies of the Auxiliary. It is challenging to me to see the results of their efforts. My only wish is that there were more of them. For I truly believe that, through the wisdom of their leaders, coupled with the diligence and eagerness of each member, the Auxiliary to the Medical Society will accomplish the tasks which it has undertaken. Also the Medical Society of the State of North Carolina will discover anew an active and indispensable partner in the accomplishment of its most difficult goals.

LEROY H. COX, *Director*  
Public Relations  
Medical Society of the State  
of North Carolina

#### A.M.A. Approves "pHisoHex" Name

The name "pHisoHex" as the shortened form of pHisoderm with Hexachlorophene has been approved by the Council of Pharmacy and Chemistry of the American Medical Association, Winthrop-Stearns, Inc., pharmaceutical manufacturers, has announced.

The product pHisoHex is an antibacterial, sudsing, emollient synthetic skin detergent. Originally introduced as a potent antiseptic detergent for surgical scrubs in hospitals, it is also widely prescribed for patients by dermatologists and is being extensively used for prevention of cross-infection in hospitals and homes. It is supplied in 3 fluid ounce refillable glass and plastic hand dispensers, and 5 ounce refillable "squeeze bottle" for wash room or emergency bag and in bottles of 16 fluid ounces, and 1 U. S. gallon. Specially constructed 10 ounce and 30 ounce dispensers for attachment to walls or a portable stand are also available.

#### Lilly Company Announces Release of Tylosterone

Eli Lilly and Company has announced the release of Tylosterone tablets (diethylstilbestrol and methyltestosterone). Heretofore, estrogens and androgens have been employed simultaneously on a basis that was largely tentative. It was theorized that when used together, they would avoid uterine bleeding and virilization while giving relief from menopausal symptoms. Now, there is conclusive clinical evidence, obtained in such a way as to preclude both prejudice and psychotherapeutic suggestion, that the combination contained in Tylosterone does minimize the undesirable side effects of estrogen alone, and furthermore, it affords an increased feeling of well-being while relieving the symptoms of menopause. In proper dosage, Tylosterone provides objective and subjective relief, without side effects.

## BOOK REVIEWS

**The 1950 Year Book of Medicine.** Edited by Paul B. Beeson, M.D., J. Burns Amberson, M.D., William B. Castle, M.D., S.M. (Hon.) Yale, M.D. (Hon.) Utrecht, Tinsley R. Harrison, M.D., and George B. Eusterman, M.D. 819 pages. Price, \$5.00. Chicago: The Year Book Publishers, 1950.

This annual review of important contributions to the field of internal medicine affords ready reference for review by the busy practitioner. The book is divided into five parts, each having its own editor. Each part has a short introduction by the editor, reviewing recent advances in the field. The introduction is followed by abstracts of published papers, to which are appended occasional notes or comments by the editor. Each part is divided into sections by subjects, with headings for ready reference at the top of the page. Abstracts of one or more articles in each general phase of medicine are included. Papers covering not only diagnosis and therapy but the mechanisms of disease are included. Illustrations depicting clinical processes, x-ray, and pathologic sections are scattered through the book. The type is large and readable, and the material well selected. The book should be especially valuable to general practitioners who might not have access to many of the journals containing the articles reviewed.

#### Angina Pectoris and Myocardial Infarction.

By Heymen R. Miller, M.D., Formerly Principal Physician and Chief, Signal Corps Climatic Research; Attending Physician, Sydenham Hospital; Assistant Professor of Medicine, New York Postgraduate Medical School and Hospital; Associate Attending Physician, Montefiore Hospital. 336 pages. Price, \$8.75. New York: Grune and Stratton, 1950.

The subtitle of this book, "With Special Reference to the Autonomic Nervous System," indicates the author's principal objective. Fully half the book is devoted to the autonomic nervous system, and the part it plays in regulating the circulation and in distributing the pain of angina and myocardial infarction.

The work should appeal to students of the autonomic nervous system, but it would have little appeal for the clinician. The style is marred by the author's habit of using the longest words possible to express his meaning. For example: "A striking aspect of referred anginal pain is its sinistrality."

The actual clinical picture of an attack of myocardial infarction is rather poorly presented. The outline of treatment also leaves much to be desired. Morphine is stressed for the relief of pain, notwithstanding its tendency to nauseate so many people. Dilaudid, codeine and Demerol—although far less nauseating—are mentioned rather casually, as an afterthought. The question as to whether to use a bedpan or commode is completely ignored.

The book can hardly be recommended for general use by practitioners, because of its difficult style, and because of its sketchy treatment of the clinical aspects of coronary heart disease. The autonomic nervous system is discussed at length, but—it seems to this reviewer—in such bombastic language that an admittedly difficult subject is made unnecessarily forbidding.



**Principles of General Psychopathology: An Interpretation of the Theoretical Foundations of Psychopathological Concepts.** By Siegfried Fischer, M.D., Clinical Instructor in Psychiatry, University of California; formerly Professor of Psychiatry and Neurology, University of Breslau. 327 pages. Price, \$4.75. New York: Philosophical Library, 1950.

Dr. Fischer, one time professor of neurology and psychiatry at the University of Breslau, and now in this country, has made, in this little volume, a readable and helpful contribution to the psychiatric literature. The book is carefully written, and, while it lacks something of the exhaustiveness which we have come to expect (and sometimes to dread) in works published in this field, there are few real deficiencies to be noted.

A certain ephemeral quality is to be expected in works dealing with sicknesses of the mind. Who is so apperceptive as to be able to enumerate, in the order of their importance, the factors entering into the final break of a schizophrenic personality? There are, however, certain guideposts to help those who would understand the causes of madness. Fischer's book illuminates these guideposts with a clearness that is unique.

The work is divided into four parts. The first two deal with the fundamental principles of psychology and psychopathology, and the latter two, with the clinical application of these principles. The book should be of help to the student of medicine (graduate or undergraduate), and particularly to the thousands of physicians who find themselves inadequately prepared to cope with the problems of psychiatry which are encountered in everyday practice.

**Recent Advances in Nutrition.** By Paul R. Cannon, Ph.D., M.D., Chairman of the Department of Pathology, University of Chicago. 74 pages. Price, \$2.00. Lawrence, Kansas: University of Kansas Press, 1950.

In this book the author presents material from three separate lectures which were addressed to the faculty and students of the University of Kansas Medical School. These lectures are titled (1) "Recent Advances in Nutrition," (2) "Dietary Essentials in Relation to Tissue-Protein Synthesis," and (3) "Pathologic Aspects of Protein Nutrition and Their Relationship to Amino-Acid Utilization." From data obtained from experiments using "the Rat-Repletion Method," conclusions are drawn as to the vital role of the essential amino acids which, with adequate vitamin and caloric intake, sustain sufficient protein reserves to meet daily body requirements, and insure adequate tissue-protein synthesis to counteract various pathic stimuli. Protein-depletion from pathologic debilitation is mentioned, and conditions for protein-repletion are discussed in order to elucidate some of the problems of convalescence and of preoperative and postoperative care.

Twenty-three graphs depicting the topical experimental work are included, and each lecture is documented with adequate references.

**Medical Management of Gastrointestinal Disorders.** By Garnett Cheney, M.D., Clinical Professor of Medicine, Stanford University Medical School. 478 pages. Price, \$6.75. Chicago: The Year Book Publishers, Inc., 1950.

In this small, well printed book, the author attempts to present, in a concise fashion, the diag-

nostic approach to the more common gastrointestinal problems as they can be evaluated in office examination, rather than by the usual textbook description of disease.

Following a section on a general approach to the patient, which includes points to be emphasized in the gastroenterologic history and physical examination, the more simple diagnostic studies which may be necessary for differential diagnosis and the general therapeutic measures are discussed.

Much practical and useful information for the diagnosis and management of simpler gastrointestinal problems is presented, but the brevity of the book limits the discussion of the more complex and difficult gastroenterologic conditions, which demand a more detailed presentation than they receive.

The book can be recommended for the general practitioner.

## In Memoriam

### GEORGE MARION COOPER, M.D.

WHEREAS, the death of Dr. George Marion Cooper, Assistant State Health Officer, which occurred on Monday, December 18, 1950, removed from our midst one of the greatest Public Health officials and humanitarians North Carolina has ever known; and

WHEREAS, his efforts in behalf of the underprivileged, especially among mothers and babies, not only were signally outstanding, but bore widespread and beneficial results in every part of our State;

Now, therefore, be it resolved by the Senate, the House of Representatives concurring:

Section 1. That official recognition be given the life and services of this distinguished and useful native of Sampson County, who, for thirty-five years was associated with the State Board of Health.

Section 2. That a copy of this resolution be given the Secretary and State Health Officer, and copies to Dr. Cooper's three surviving children.

Section 3. That today's adjournment be in honor of Dr. Cooper.

Section 4. That this resolution shall be in full force and effect from and after its ratification.

### JOHN BARRETT WALKER, SR., M.D.

WHEREAS, Dr. J. B. Walker, Sr., has joined the group of our fellow members who have gone on ahead to richer fields of service, and

WHEREAS, this Society is deeply conscious of its loss of a worthy colleague and amiable friend, and

WHEREAS, his willing and untiring efforts to help his fellow man continue to serve as a stimulus to us all;

BE IT RESOLVED: That the Alamance-Caswell Medical Society record its feelings of high tribute to him as physician, conferee and friend, and

BE IT FURTHER RESOLVED: That a copy of these resolutions be included in the permanent records of this society, and a copy sent to the family and to the North Carolina Medical Journal.

Signed:

P. Y. Greene, M.D.

## BULLETIN BOARD

(CONTINUED FROM PAGE 50)

### AMERICAN HEARING SOCIETY

In 1937 a sum of money was subscribed in memory of Miss Coralie N. Kenfield of San Francisco, California, a teacher well known throughout the United States for her high ideals and advanced methods in teaching lip-reading. This money, placed in the Kenfield Memorial Fund, is administered by the American Hearing Society and provides an annual scholarship. The amount of the Kenfield Memorial Scholarship for 1951 is \$100.00. Applicants must be prospective teachers of lip-reading to the hard of hearing. Those already teaching lip-reading cannot be considered. Applications must be filed between March 1 and May 1, 1951 with:

Miss Rose V. Feilbach  
Chairman, Teachers' Committee  
1157 North Columbus Street  
Arlington, Virginia

### AMERICAN COLLEGE OF CHEST PHYSICIANS

The Fourth Annual Postgraduate Course in Diseases of the Chest, sponsored by the American College of Chest Physicians, Pennsylvania Chapter, and the Laennec Society of Philadelphia, will be presented at the Hotel Warwick, Philadelphia, Pennsylvania, March 26-30, 1951. This course will emphasize the recent developments in all aspects of the diagnosis and treatment of chest disease. It is open to all physicians, although the number of registrants will be limited. The tuition fee is \$50.00, and applications will be accepted in the order in which they are received. Applications should be sent to the American College of Chest Physicians, 500 North Dearborn Street, Chicago 10, Illinois.

### DEPARTMENT OF DEFENSE

Secretary of Defense George C. Marshall recently named Dr. Richard L. Meiling, Director of the Office of Medical Services, Department of Defense, as the Chairman of the Department of Defense Blood Donor Campaign. Dr. Meiling will act as liaison with the American National Red Cross, and will direct and coordinate the program with the Department of Defense.

\* \* \*

#### Three Civilian Members Appointed to Armed Forces Medical Policy Council

Three nationally prominent civilian professional men have been appointed to the recently established Armed Forces Medical Policy Council, the Department of Defense has announced.

The new Council members are Drs. I. S. Ravdin, Philadelphia; W. Randolph Lovelace II, Albuquerque; and James P. Hollers, San Antonio.

Their appointments complete the membership of the seven-man Council. Appointment of the other members—Dr. Richard L. Meiling, Chairman, and the Surgeons General of the Army, Navy, and Air Force—was announced January 5, 1951.

Dr. Ravdin is a nationally known surgeon and the John Rhea Barton Professor of Surgery at the University of Pennsylvania. Dr. Lovelace is a trustee of the Lovelace Clinic in Albuquerque and an authority on aviation medicine. Dr. Hollers, a practicing dentist, is a member of the House of Delegates of the American Dental Association and a past national president of the Reserve Officers Association.

### ATOMIC ENERGY COMMISSION

The *Sourcebook on Atomic Energy*, a comprehensive review of basic non-secret atomic energy information prepared under the direction of the Technical Information Service of the U. S. Atomic Energy Commission was published December 4, by the D. Van Nostrand Co., New York, N. Y.

The sourcebook was written by Dr. Samuel Glasstone, scientist and author and consultant to the AEC, who also served as executive editor of the recently published *Effects of Atomic Weapons*. The foreword was written by Chairman Gordon Dean of the AEC.

The publisher of the book was chosen by the AEC on the basis of open competitive bidding. A major consideration in the award of the contract to the D. Van Nostrand Co. was the fact that the company offered to sell the 546-page volume, illustrated, bound and indexed, at the lowest retail price: \$2.90 per copy.

The sourcebook is considered suitable for use by anyone interested in the scientific and technical aspects of atomic energy, including college students, teachers, and textbook authors.

### DEPARTMENT OF THE ARMY

#### Army Develops Substitute for Morphine

Perfection of a new synthetic narcotic to replace morphine was announced recently by Dr. Henry K. Beecher, civilian consultant to the Army Surgeon General. Dr. Beecher is professor of research in anesthesia at the Medical School of Harvard University and chief of the Department of Anesthesia at Massachusetts General Hospital.

Just arrived from Korea where the new drug, Methadone, was tested on hundreds of American and allied wounded at the farthest forward evacuation hospital near Hamhung, Dr. Beecher declared that the field tests verified the findings that have been made in thousands of postoperative cases during the last three years at Massachusetts General Hospital.

The story of Methadone goes back to the day in 1945 when the Army took over the I. G. Farben plant in Germany. Preliminary work had been done there and the information turned over to the Research and Development Board of Army Medical Service. During the postwar years the Surgeon General's Office has worked closely with other interested groups to perfect the new synthetic which has the same effect as morphine, milligram for milligram, and which is made from nitriles derived from nitrogen and hydrocarbons.

An interesting sidelight is that Methadone may be less habit-forming and will probably be of great help in curing morphine addicts. Tests at the United States Public Health Service for addicts at Lexington, Kentucky, showed that the drugs relieve the terrible sufferings of patients being taken off morphine.

### VETERANS ADMINISTRATION

Dr. John G. Hood, who has been manager of the Veterans Administration Hospital at Chamblee, Georgia, was appointed manager of the V. A. Hospital in Richmond, Virginia, effective January 21, 1951.

Dr. Hood attended the University of Georgia at Athens and the University of Georgia Medical School at Augusta, receiving his M.D. degree in 1925. He is a member of the Columbia, South Carolina, Medical Society and the American Heart Association.



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## SOME COMMENTS ON THE REGIONALIZATION OF HOSPITALS

SAMUEL PROGER, M.D.\*

BOSTON, MASSACHUSETTS

The basic aim of regional hospital integration is to make available a higher quality of medical care to a larger segment of society as efficiently and economically as possible. This is both an economic and an educational problem.

### *The Economic Problem*

In general, better medical care is more expensive medical care. For example, good x-ray and laboratory personnel and facilities are expensive. Such improvements in medical care, however, can often nowadays be made largely self-supporting through insurance or private fees.

The expenses inherent in an educational program, however, cannot so readily be covered by patients' fees, for the reason that the benefits of such an educational program are intangible, indirect, and not clearly recognizable. Yet I dare say that within a given region nothing is more essential to the development and maintenance of a high quality of medical care than a continuing and serviceable educational program as it relates both to practitioners and ancillary personnel.

Advances in medicine may be of no value, or may even prove harmful, if they are not intelligently applied. They may be intelligently applied only through the medium of education. It is startling to find large sums of money being widely raised and liberally appropriated for fine buildings and expensive equipment, with little or no regard for the importance of financing an educational program to help make these buildings and

their equipment maximally useful. Hospital administrators think nothing of charging patients twenty-five dollars for some x-ray films of the intestines, yet they consider it improper to charge these same patients five dollars, let us say, for an educational program for their institution which would make the roentgen examination, and everything else that is done for the patient, more meaningful and hence more useful. I rather suspect that the patient would get more in return for each dollar expended for such a program than for any other dollar he may have spent in the hospital.

It is taken for granted that the cost of medical care in a teaching hospital is higher than it is in a nonteaching hospital. It is the teaching program that is responsible for this added cost, but it is this program that is also responsible for the higher quality of medical care found. An educational program is a legitimate hospital expense and, in large part, is legitimately chargeable to patients. When insurance agencies accept this principle widely, an important step forward will have been taken in the elevation of standards of medical care.

### *The Educational Problem*

We must maintain a wide and relevant view of the problem of medical care. The hospital administrator is likely to think of the problem in terms of efficient hospital administration; the economist, in terms of prepaid medical insurance; the trustee, in terms of building, laboratory, and x-ray facilities; the patient, in terms of the personality of his physician, and so on. In the final analysis, the problem of medical care resolves itself into providing a doctor for a patient and satisfactory facilities for that doctor, be he a

Read before the First Annual Meeting of the North Carolina Health Council, Raleigh, North Carolina, June 14-15, 1950.

\* Professor of Medicine, Tufts College Medical School; Physician in Chief, New England Medical Center; Chief of Staff, Pratt Diagnostic Clinic; President, Bingham Associates Program.

pathologist, a public health officer, a general practitioner, or a highly specialized consultant. In order that the facilities which are provided that doctor be satisfactorily employed, the physician must, of course, be competent. The physician and the patient, or the potential patient, occupy the center of the medical picture, a fact often overlooked. The competence of the physician will be determined by a good and continuing educational program and by the physical facilities and ancillary services which can be made available to him.

A hospital may have the finest possible accounting system, but if the doctor mistakes myxedema for nephritis, the patient will die unnecessarily—his account in order, but his death nevertheless unnecessary. A hospital may have the finest x-ray equipment and the best roentgenologist, but if the local practitioner is unaware that a diaphragmatic hernia does not necessarily require radical surgery, the patient will suffer needlessly, even though he has had a good x-ray diagnosis. A hospital may have excellent laboratory facilities through which it may be found that a patient has a tumor of the spinal cord; but if the doctor does not know that he is incapable of removing the tumor, the laboratory facilities will have been more harmful than helpful. It is well to keep such considerations in mind as one gets involved in the details of regionalization. It is well also to bear in mind the close interdependence of all phases of the problem of regionalization—economic, technical, and administrative, as well as professional.

#### *Division of Labor*

I should like to comment briefly on the problem of clinical aid. In current models of national health planning there is at least an implied suggestion that certain functions and certain types of patients should be allocated to specified cooperating units. This may be impractical and hence unwise. Physicians will always resent being told just what they may or may not do in the field of medicine. For that matter, who can say that Dr. Jones in a distant crossroads village cannot do an appendectomy just as skillfully as Dr. Smith in a larger medical community?

If the general lines of the program are first set up, a division of labor based largely on public education, personal abilities, and natural tendencies will ultimately result. This will happen, however, only after the

program has been operating for some time; it will not happen spontaneously at the outset.

When Mrs. Brown learns that more specialized forms of surgery or diagnostic study can be performed only in certain regional or base centers, she is likely to ask her local physician to send her to one of these centers when it becomes necessary. Moreover, it has been our experience that when the local physician comes to recognize that the district and base centers, not only do not represent a threat to his economic and professional existence, but, as adjuncts to his practice, actually serve him, he will begin to cooperate in the joint effort toward a more efficient division of labor.

One of the great initial obstacles to the regional organization of hospitals is the fear on the part of physicians that their freedom of action will somehow be limited and, particularly, that they will be required to refer certain types of patients through established channels. This feeling may be sufficiently strong to incline them to send patients elsewhere in order to demonstrate their independence. It is my belief that the referral of patients need not be considered initially. The program should ultimately be of such demonstrated value, and the working relationships so cordial, that the problem of referrals will automatically take care of itself. The centers should be stimulated to justify the confidence of the potential group of referring doctors. Having once demonstrated their value, the centers should be stimulated by the possibility of competition from other hospitals to maintain the best service and friendliest relations possible.

#### *Continuing Education Through Hospital Teaching Programs*

I have a special interest in educational programs as they affect the practitioners in the hospitals within a given region. We shall take for granted the importance of medical journals, society meetings, and postgraduate courses as educational media. I should like to discuss instead some less familiar approaches to the problem of the practitioner's continuing education.

It is probable that the highest quality of medicine in this country today is that practiced in the medical school hospital. It is more or less assumed that these high standards are directly related to the teaching programs which are such an essential part of



these hospitals. Medical teaching and medical care are intimately combined, to their mutual advantage. It is more than a coincidence that in these same hospitals are found what may be regarded as our best informed—or, if you will, our best educated—medical practitioners. Practitioners who are actively connected with medical school teaching hospitals are, in a sense, automatically exposed to continuous medical education. Ideally, therefore, if we could put all physicians into such an environment, we would largely solve the problem of the continuing education of the practitioner.

Since this ideal is obviously impossible, perhaps the next best thing is to try to create a similar teaching environment in more hospitals, and hence to supply continuing education to more physicians. It is probable that the greatest return for the effort expended in advancing the educational status of the practicing physician will come from that effort which is directed toward developing the best educational program possible in the largest number of hospitals.

#### *Classification of Hospitals*

For the purposes of a teaching program, hospitals may be said to fall into three groups as follows: (1) the medical school hospital; (2) hospitals of 200 beds or more, which might serve as district centers but which are not directly connected with a medical school; (3) hospitals containing up to 100 beds or so, including the small community hospital. Ideally, these three groups of hospitals should be contained within a coordinated educational program, the educational focus in a given region being the medical school and hospital center. This is essentially the basis of the Bingham Program at Tufts and the New England Medical Center. The teaching program in each type of hospital will, of necessity, vary considerably. In the medical school hospital the program centers in the clinical faculty, the medical students, and the house officers. In such hospitals teaching programs are well established.

#### *Larger Hospitals Not Connected with Medical Schools*

In larger hospitals not directly connected with the medical school, the effectiveness of a teaching program will depend largely on the enthusiasm and interest of a few key practitioners on the staff. Since this is such a variable factor in many hospitals, we have been experimenting for some years with

what we call a "teaching resident." This resident is, in effect, a local coordinator of education who can devote full time to supervising the educational program for the house staff. An able teaching resident with a full-time radiologist, pathologist, and anesthesiologist may constitute, to all intents and purposes, a local faculty. The educational impact of this faculty is felt most directly by the house staff, but the effect inevitably spreads over into the visiting staff as well.

Grand rounds, other types of teaching rounds, clinicopathologic conferences, journal clubs, talks and clinics by visiting physicians, roentgenologic conferences—all of these can be, and are expected to be, organized for the benefit of the house staff by the small full-time group to which I have referred. These activities soon become a part of the medical life of the practicing physicians of the community. The benefits to the practitioners, to the full-time hospital group, and to the patients are obvious.

It can easily be arranged for this active nucleus in the district hospital to work directly with a medical school hospital center. With such a nucleus well established, the educational activities of local doctors can be expected to coalesce about it. It is educationally profitable to work with the practicing physicians through the medium of an educational program intended primarily for the hospital staff. The current shortage of interns, however, makes this approach increasingly difficult.

#### *Smaller Hospitals*

Such an approach is satisfactory for the larger sized hospitals, in which a teaching nucleus and an intern staff can be established. But what of the smaller hospitals and the practitioners who work in them? A really good teaching program for practitioners in small and moderate sized community hospitals may never be worked out. We must accept the fact that with few exceptions the farther removed any educational program is from the school center—that is, the farther removed in the sense of effective contacts—the less effective it will be. It is the continuous influx of students who must be taught that creates a continuing and vital teaching program, and a so-called teaching atmosphere. In hospitals not connected with the medical school, and in those without an intern staff, this important ingredient—namely, the continuous influx of students who

have to be taught—is lacking, so that a teaching atmosphere does not arise spontaneously. It must be created, and it must be constantly nurtured. This is a difficult task.

#### *The problem of personnel*

One method of attacking the problem is through short-term interns and teaching residents. The small hospitals can expect such an intern or resident for only one month, or at the most two, in the year. There are limitations to a program of this sort, but there are real advantages as well. We are at present extending our experiences with this approach. It is yet too early to judge its results.

One of our more recent, and thus far promising, efforts in regard to continued education in small community hospitals has been to employ senior residents from the medical school hospital for clinical talks. Small communities are frequently hard to reach, and they can muster at best only a few practitioners for a meeting. Under these circumstances it is not reasonable to expect teachers of repute, or even busy younger faculty members, to undertake the time-consuming trips to distant small communities. In regard to the senior resident staff the situation is different. The resident has much to gain from the experience of teaching—or of transmitting information, if you will. It is not unlikely that, through the necessary preparation of medical material for presentation to the community hospital staff, he profits more than the audience. He also benefits in no small measure from professional intercourse with practitioners in small communities. There can be no doubt of the salutary effect on the resident. But what about the staff whom he addresses? Will they accept a young and inexperienced teacher? And, more to the point, will they learn anything from him?

In the medical school hospital it is now commonplace to speak of the resident staff as an important educational stimulus. If this is true in the medical school hospital, it should certainly be true on a limited scale in a small community hospital. The resident does not come to the community hospital as an expert, but he comes to impart knowledge derived from experts, either from his own hospital or from the literature. Just as the resident may be assigned the task of reviewing the literature on some clinical topic for his own staff, so he may be assigned a similar task for the staff of a distant small hospital. In this manner, even the small hospitals

can have access to a fresh and continuing source of information.

When an attempt is made to use the regular faculty for such assignments, a number of obstacles are encountered. Among them are (1) the considerable expense (residents need only be given traveling expenses); (2) the limited supply of regularly available personnel; (3) the occasional decline of interest caused by having the same person over and over again; (4) the relative waste of teaching talent. From a resident staff of moderate size, a fairly large number of small hospitals can be supplied with monthly reports on important current medical topics, and this supply can be automatic and continuous—an important practical consideration. Our experiences to date with this program have been very gratifying.

#### *Selection of curriculum*

We have been intrigued by the thought of trying to determine what might be considered the ten or twelve most important topics worthy of presentation in any given year. A curriculum of this sort is worthy of the most serious consideration by the best medical educators. The curriculum needs to be changed from time to time in order to keep the material up to date. The necessity of having to determine from year to year what new medical information is most urgently needed by practicing physicians should have a good effect not only on the practitioners but on the teachers as well, and through them on the students in the medical school and its hospital. The practicing physicians should of course take part in the selection of this curriculum, for any teaching program designed for the practitioner must be acceptable to him. The teaching material must be important, it must be desirable, and it must be fairly easy to absorb. If it does not meet all these criteria, it is relatively useless.

#### *Possibilities for the Future*

I have discussed certain features of an educational program that apply to the practicing physician. This discussion is intended only as an example of a limited approach to but one of many groups of people who are concerned with the total problem of medical care. Further extensive experimentation is necessary in programs directed toward the education of other personnel such as radiologists, anesthesiologists, nurses, hospital administrators and trustees, and so on.

The program at Tufts has been based on



the obvious fact that improved educational standards, both technical and professional, will result in improved medical care. This program has involved the close collaboration of a medical school, a number of hospitals, and groups of physicians—chiefly general practitioners.

There is a theoretically ideal situation in which these various participants are more or less arbitrarily assigned their respective roles and specifically directed into definite channels. This was essentially the method employed by the armed services. Such an organization can be maintained either through strong authoritarian control or through the emotional impact of a cause. In a free society this theoretically ideal situation could not be maintained for any length of time. The imperfections need not extend, however, to the present more or less haphazard approach to the problems involved. There is a middle ground, and it is in this area that a certain internal cohesion, based on the fact that the majority of those concerned in the program would have some selfish interest in keeping it going, can be achieved. A pretty good program which works is much better than an ideal program which does not work. We should strive for the ideal, but we should be prepared to accept the adequate.

Finally, it is important to bear in mind that the basic ingredient for a fruitful regional program is a spirit of mutual interest and trust on the part of the participants, and a desire on the part of all to work together for the common good. If this ingredient is present, all else becomes mere detail.

## THE SITUATIONAL PATTERN IN CHILDHOOD INJURY

### *I. Data Derived from North Carolina Newspapers*

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In the discussion of Segerberg and Spurling's paper on "Acute Cranio-cerebral Trauma,"<sup>(1)</sup> the statement was made that "the first step in preventive neurosurgery as it relates to head trauma should therefore be a more accurate analysis than exists today of the forces and situations by and in which these injuries occur. Such a situational study is now being conducted in my state and it is

planned to publish it in the near future."

The concept is widely accepted<sup>(2)</sup> that accident control is largely a function of parents. To exercise this function, parents must be educated so that they can protect the younger child and discipline the older child. The situational patterns of grave childhood accidents show a strong and easily discernible trend toward brutal, monotonous repetition.

Since many victims of childhood accidents are not hospitalized, the pattern of many tragedies cannot be found in hospital records. For this reason, all North Carolina newspapers were surveyed for the twelve month period from July 1, 1949, through June 30, 1950, in order to discover the descriptive pattern of all accidents involving children through the age of 15. Subscriptions to clipping bureaus and newspapers, and the aid of the Duke Public Relations Bureau, were utilized in assembling this mass of published data—data that can only show a statistical trend.

A second study will report the situational pattern associated with head injuries during the past five years in children who survived long enough to be admitted to the Duke Hospital.

Table 1  
Deaths and Injuries from Childhood Accidents in N. C. — July, 1949 through June, 1950

Month	No. Children	No. Boys	No. Girls	No. Deaths	No. Injuries
July .....	60	41	19	32	28
August .....	74	57	17	53	21
September .....	32	26	6	20	12
October .....	65	44	21	31	34
November .....	46	32	14	17	29
December .....	48	23	25	27	21
January .....	35	22	13	13	22
February .....	47	33	14	17	30
March .....	40	26	14	19	21
April .....	37	16	21	18	19
May .....	33	13	20	23	10
June .....	35	30	5	24	11
Total .....	552	363	189	294	258

Table 2  
Causes of Deaths\*

	No. Deaths
Motor vehicle .....	134
Drowning .....	46
Burns .....	46
Bicycle .....	21
Suffocation .....	13
Guns .....	12
Electrocution .....	6
Hanging .....	4
Train .....	4
Crushing .....	4
Poisoning .....	2
Explosion .....	1
Fall .....	1
Total .....	294

From the Division of Neurosurgery, the Duke Hospital and Medical School, Durham, North Carolina.

\* Fireworks and homicidal attempts were each responsible for two injuries, though no deaths resulted from these causes.

Table 3

## Analysis of Injuries Due to Motor Vehicle Accidents

Type of Vehicle	No. Injuries
Automobile .....	235
Truck .....	45
School bus .....	37
Bus .....	4
Motorcycle .....	4
Tractor .....	2
<b>Total</b> .....	<b>327</b>

## Classification of Accident

Automobile-pedestrian .....	161
Automobile alone .....	37
Automobile-automobile .....	33
Automobile-motorcycle .....	2
Automobile-tractor .....	1
Automobile-bus .....	1
Truck-pedestrian .....	30
Truck alone .....	10
Truck-automobile .....	5
School bus alone .....	33
School bus-pedestrian .....	1
School bus-automobile .....	1
School bus-truck .....	1
School bus-truck-pedestrian .....	1
Motorcycle alone .....	3
Motorcycle-pedestrian .....	1
Bus-pedestrian .....	2
Bus-truck .....	2
Tractor alone .....	2

**Total** ..... 327

## Type of Injury

Head injury .....	95
Other injuries .....	107
Killed instantly .....	82
Not known .....	43

**Total** ..... 327

## Mode of Accident

## Major patterns

Running in front of vehicle .....	92
Collision of vehicles .....	68
Running behind parked car .....	34
Vehicle out of control .....	34
Running into side of vehicle .....	19
Fall from moving car .....	16
Hit by backing vehicle .....	7
Recorded as "struck by vehicle" .....	19
Not known .....	19

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## Miscellaneous accidents

Truck ran on sidewalk .....	2
Fell off fender .....	2
Car ran into yard .....	1
Truck turning around in yard .....	1
Sitting in front of car .....	1
Sitting on bumper of car .....	1
Playing in front of car .....	1
Truck chain dragged child into wheel .....	1
Fell off vehicle, run over .....	1
Fell off tricycle, struck by car .....	1
Pinned between fenders .....	1
In barrel, struck by vehicle .....	1
Struck by swinging door of vehicle .....	1
Playing with controls of tractor .....	1
Fell from tractor, run over by wheel .....	1
Struck by passenger in other vehicle .....	1
Defective vision in child .....	1

19

**Total** ..... 327

Table 4

## Analysis of Injuries Due to Bicycle Accidents

Cause	No. Injuries
Automobile .....	33
Truck .....	3
Fall from bicycle .....	3
Bus .....	1
Not known .....	3
<b>Total</b> .....	<b>43</b>

## Type of Injury

Head injury .....	17
Other injuries .....	9
Killed instantly .....	9
Not known .....	8

**Total** ..... 43

## Mode of Accident

Collided with vehicle .....	7
Riding on right side, made left turn .....	7
"Struck by vehicle" .....	5
Fell from bicycle .....	3
Riding on left side, collision .....	2
Rode out of driveway in front of car .....	2
Crossed stop-light, struck by vehicle .....	2
Crossed in front of car .....	1
Riding without a tail light .....	1
Riding on left side of road with no light .....	1
Unknown .....	12

**Total** ..... 43

Table 5

## Analysis of Deaths Due to Drowning

Place	No. Deaths
River .....	15
Lake .....	12
Creek .....	9
Swimming Pool .....	3
Ditch .....	2
Home lily pond .....	1
Sound .....	1
Not known .....	3

**Total** ..... 46

## Mode of Accident

Boat overturned .....	8
Walked into deep water .....	7
Fell out of boat .....	5
Swimming .....	4
Found in swimming pool .....	3
Wading .....	2
Dived from dock .....	2
Dived from bridge .....	1
Attempted to cross flooded creek .....	1
Knocked from trestle by train .....	1
Fell into ditch .....	1
Fell into home lily pond .....	1
Fell from foot bridge .....	1
Fell from river wiring cable .....	1
Not known .....	8

**Total** ..... 46



Table 6

## Analysis of Accidents Involving Firearms

Type of Weapon	No. Injuries
Rifle .....	10
Pistol .....	5
Shot gun .....	4
Air rifle .....	2
.45 cal. bullet .....	1
Unknown .....	3
<b>Total</b> .....	<b>25</b>

## Types of Injury

Head injury .....	3
Other injuries .....	19
Not known .....	3
<b>Total</b> .....	<b>25</b>

## Mode of Accident

Shot by companion .....	8
Found weapon in home .....	2
Hammered bullet .....	1
Children fighting over loaded weapon .....	1
Older person cleaning "unloaded" gun .....	1
Duel or fight with playmate .....	1
Loaded gun fell over and discharged .....	1
Target practice .....	1
Shooting at rats .....	1
Shot by father .....	1
Shot self accidentally .....	1
Fell and shot self while hunting .....	1
Suicide .....	1
Unknown .....	4
<b>Total</b> .....	<b>25</b>

Table 7

## Analysis of Deaths and Injuries Due to Burns

## Mode of Accident

	No. Cases
Left alone in home .....	21
Kerosene poured in stove; house burned .....	8
House burned .....	7
Oil stove exploded; house burned .....	3
Trailer burned .....	2
Clothes ignited from fireplace .....	3
Clothes ignited from trash fire .....	1
Clothes ignited from open heater .....	1
Clothes ignited from dump fire .....	1
Clothes ignited from grass fire .....	1
Children dropped match in gas tank .....	3
Can or tank of gasoline ignited .....	2
Playing with matches .....	1
Threw insect fluid in fire .....	1
Lighted kerosene rag thrown on child .....	1
Fell into scalding water .....	1
Playing with chemicals .....	1
Unknown .....	1
<b>Total</b> .....	<b>59</b>

Table 8

## Analysis of Deaths Due to Suffocation

## Mode of Accident

Found in bed ? .....	4
Found between bed and wall .....	3
Caught between sofa and trailer wall .....	1
Caught between slats of crib .....	1
Bed clothes over head .....	1
Choked on toy balloon .....	1
Peanut in lung .....	1
Buried by mother .....	1
<b>Total</b> .....	<b>13</b>

Table 9

## Analysis of Accidents Due to Miscellaneous Causes

Type of Injury	No. Cases
Head injury .....	7
Other injuries .....	16
Killed instantly .....	15
<b>Total</b> .....	<b>38</b>

## Type of Accident

<b>Falls</b>	
From school swing .....	1
From truck .....	1
From porch .....	1
From second story window .....	1
Into well .....	1
Bumped heads .....	1
	<b>6</b>
<b>Hanging</b>	
Head caught between bed slats .....	2
Stood on chair, reached chain .....	1
Playing cowboy, fell from tree .....	1
	<b>4</b>
<b>Poisoning</b>	
Ate high blood pressure tablets .....	1
Left in closed car (carbon monoxide gas) .....	1
	<b>2</b>
<b>Crushing</b>	
Crushed in falling building .....	2
Crushed by falling tree .....	1
Crushed by ice box .....	1
Crushed by falling wall .....	1
	<b>5</b>
<b>Electrocution</b>	
Grasped live wire hanging from power pole .....	1
Placed finger in light bulb socket .....	1
Made contact with guy wire; secondary contact with power line .....	1
Cable broke over tower line and touched child .....	1
Flying copper kite; wire came in contact with power line .....	1
Playing electric target game in wet suit .....	1
Touched electric fence; bare feet on wet ground .....	1
	<b>7</b>
<b>Explosion—Playing with "dead" shell</b> .....	<b>2</b>
<b>Train</b>	
Grade crossing accident .....	5
Truck stalled on tracks .....	1
Car stalled on tracks .....	1
Playing on tracks .....	1
	<b>8</b>
<b>Fireworks</b>	
Playing with fireworks bomb .....	1
Playing with mercury cap .....	1
	<b>2</b>
<b>Homicidal attempt—Beaten by parent</b> .....	<b>2</b>
<b>Total</b> .....	<b>38</b>

### *Comment*

The data revealed by this survey of newspaper reports on childhood accidents occurring in North Carolina during 1949 and 1950 apparently indicate a real statistical trend. This statement is confirmed by the fact that the three most common types of accidental injury reported herein correspond to the three leading causes of fatalities among the 14,000 children who met accidental deaths in the United States in 1947<sup>(2)</sup>. On the other hand, fatal or near-fatal falls, which represent the fifth most common cause of accidental deaths in children on a nationwide scale, did not appear to command attention in newspapers. The situational pattern of injuries received from falls, and perhaps other types of injuries, will be discussed in the second report of this series.

### *Seasonal incidence of childhood accidents*

The seasonal incidence of accidental deaths and injuries is portrayed in figure 1. The graphs indicate that the preponderance of accidental injuries occur during out-of-school months. As is to be expected, accidents leading to burns and drownings show a strong seasonal incidence.

### *Relation of age to the type of accident*

Briesen's survey<sup>(3)</sup> showed that the highest incidence of head injuries due to auto-pedestrian accidents occurred at the age of 6; of those due to auto-bicycle accidents, between the ages of 11 and 15; and of those due to falls, below the age of 16. According to the data presented in the present report, 32 out of 327 children killed or injured in vehicular accidents were 2 years of age or under. Children in this age group were among the victims of automobile collisions. They and slightly older children opened car doors and fell into the highway. Children in this age group were crushed by cars backing out of garages and down driveways. They sat on fenders and mudguards, or played around standing cars that were put in motion by unobservant drivers.

The children involved in bicycle accidents were in an older age group; only 11 out of 43 were below the age of 10, and only 1 child (aged 4) was less than 5. Most victims of drowning were likewise in this older age group. Young children, including those under 5, however, were left unprotected in boats or fell into shallow water such as ditch water or home lily ponds. Children in the younger

age group were the major victims of burns; 44 out of the 59 children who suffered burns were 5 years old or younger.

### *Recurrent situations in accident picture*

The situational pattern of various injuries is described in the tables, and the recurring circumstances are readily apparent. Children run in front of vehicles from behind parked cars, and dash into the sides of vehicles. They are the victims of collisions and are in overturning vehicles. They play around vehicles, and are injured by inattentive drivers. Children ride bicycles on the right side of the road and turn left into vehicles coming from behind. They are allowed to use lethal weapons without training, and to play in the home with loaded guns. They are left alone in homes that burn, or are allowed to play around open fires in the home and outdoors. They may be left unprotected in boats or allowed to play near deep or shallow water.

Bowden<sup>(4)</sup> has commented upon the fact that death by smothering is used as a diagnostic wastebasket; however, small children falling between the bed and the wall succumb to a real form of accidental injury. Finally, the play instincts of small children lead them into devious patterns of accidental injury that can scarcely be foreseen. Some of these are shown in table 9.

### *Head injuries*

The relationship between the patterns of accidental injury and head injuries will be discussed in the second report of this series. Among the 552 accidents included in the present analysis 122 head injuries were reported, and at least 106 injuries were so immediately grave that the children were reported as being killed instantly. Head injuries were reported most frequently in accidents involving motor vehicles and bicycles.

### *Conclusions*

Situational patterns of accidental injury in North Carolina recur with tragic frequency. The causes of death in this survey correspond closely with those noted in national statistics.

Hospital surveys are indicated for the study of specialized injuries. Such surveys, including follow-up studies, are necessary to reveal the potential crippling effects of injuries in children who survive. A second report, based on Duke Hospital records, will present these aspects of childhood accidents as they concern head injury.



The education of parents to the situations commonly leading to childhood accidents may be one means of reducing these appalling statistics.

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## FROM LAISSEZ FAIRE TO REGIMENTATION AND BACK AGAIN: THE PEDIATRIC PENDULUM

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BLACK MOUNTAIN

The pediatrician is a very modest fellow. The only achievements he claims on behalf of his specialty—one of the youngest of them all—is popularizing the periodic preventive health examination, purifying the country's milk supply through the pioneering efforts of medical milk commissions, and reducing a previously high infant mortality rate through the promotion of breast feeding and simplified methods of artificial feeding.

Far be it from me to detract from the achievements of my chosen specialty. Even our most ardent admirers (if we have any outside our own ranks) must concede, however, that pediatricians have one rather serious fault—a proneness to follow the latest medical fashions and fads. Our desire to be right up to the minute in medical, and especially in pediatric, theories and practices sometimes makes us forget the wisdom of the old admonition:

Be not the first by whom the new is tried  
Nor yet the last to lay the old aside.

Evidence of this failing can be found by reviewing pediatric attitudes—historic as well as current—with regard to three problems of child management that consume so much of the time, not only of the pediatrician, but of the general practitioner, who deals so extensively with children. These problems have to do with (1) *eating*, (2) *elimination*, and (3), though somewhat less important than the first two—*thumb-sucking*. It may help in our discussion if we take

up these three in order. I will use these topics in proving my contention—which is that within the limits of my professional life I have seen the pendulum swing in pediatrics from a policy of *laissez faire*—do as you like—to one of absolute regimentation, and then back again. Moreover, the swing from one extreme to another has been accomplished without so much as a moment's pause at the center point—the golden mean.

### Grandma's Day

Near the end of the first decade of this century, when I was serving my medical apprenticeship, we were just emerging from what all respectable pediatricians honestly believed and fervently maintained were the dark ages of child management or, as we considered it, child neglect. Those were the days when it was neither the doctor nor the mother, but Grandma who knew best.

*Feeding*: Grandma fed the baby whenever he cried. She gave him as much as he wanted or as little as he liked, and she gave it to him just about whenever he pleased. If that didn't quiet him—and quite frequently it didn't—she was sure that he had colic, and dosed him at her own sweet will with catnip, camomile, or fennel tea, followed by “a course” of calomel and a “good” dose of castor oil.

When it came to *elimination*, the baby was expected to soil his triangulars (the “hospital square” was just coming into vogue) whenever and wherever he pleased, with apologies neither offered nor expected, up to the age of 2, or even 3 years. As Grandma said, he was only a baby—what more could you expect?

As for *thumb-sucking*, not only did Grandma never reprove him for this habit; she even aided and abetted him in it by thrusting his none too clean digit into his mouth to still his cries. Worse still, in the scandalized opinion of the sanitary-minded young physician, she actually popped a “pacifier” (anglicé sugar tit) into his mouth, first making it fast with a long string tied to his high chair or crib, so that

When hunger called or anger,  
'Twas never wanting there.

### Day of Reform

All three of these evil practices were roundly condemned by the early pioneers in the art of pediatrics who were then introducing the youngest of the specialties into our medical schools. Not only did we reprobate

them in no uncertain terms; we entered the lists and manfully battled against them—and against Grandma, too. It was a real battle, but in those days we knew—or thought we knew—all the answers. Just how did we proceed in our crusade?

#### *Regulated feeding*

We offered the baby his bottle, with its mathematically calculated percentages of protein, carbohydrate, and fat, every two, three, or four hours, precisely on schedule, as determined by the particular pediatric professor who was the source of all our knowledge. Furthermore, we insisted that the baby take every ounce we ordered, no matter how reluctant he might be to empty his bottle. Nor was he ever to be permitted a single drop more than the prescribed amount, even though Grandma “just knew” that he was still hungry. It was now the doctor, and no longer Grandma, who knew best in this period of reaction against the earlier policy of *laissez faire*.

It was not until Marriott slipped in the suggestion, as a quite minor detail of his instructions for simplifying bottle feeding by the use of evaporated milk, that the baby be allowed to take as little or as much as he wished, that some of us lesser fry dared to admit that we had been following this very unorthodox practice for years.

#### *Regulated elimination*

Coming to the subject of elimination, what a dissertation could be written (and frequently was!) about the various colors and shades of stools that we interns and residents collected so faithfully and discussed so masterfully! At least we refrained, even in those days of strict medical regimentation, from interfering with the young baby's right to evacuate whenever he chose; but with the toddler it was a different story.

We insisted that every runabout child have one movement per day, preferably in the morning, whether he wanted to or not. There was something immensely satisfying to us—and even more gratifying to the young mothers who hung on our words—in what we and they described unctuously as a “good” movement. Constipation was a bugbear to be shunned like the plague. We refused to admit that a child who had failed to have his movement one morning might surprise everyone by having a perfectly normal one at the end of forty-eight, or even seventy-two hours (if

he were allowed to wait that long), even though he frequently did! A child was praised inordinately for having a “good” movement, while mothers were plunged into gloom when the daily evacuation failed to take place on time.

#### *The battle against thumb-sucking*

Above all, we battled against thumb-sucking and, horror of horrors, the pacifier or sugar tit. Pediatric and dental authorities were unanimous in their condemnation, and bibliographic references on the evil effects of thumb-sucking abounded. I shall never forget my amazement when, in 1909, I saw the respected old Viennese pediatrician at whose feet I was sitting to hear the latest advances in pediatrics reach for a pacifier and pop it into the mouth of a youngster whose wails were disturbing his demonstration. The rest of that day's instruction was a total blank so far as I was concerned. I was convinced that *der guter Herr Professor* could not be up-to-date in other things when he was such an old woman as to resort to this archaic childhood indulgence.

In those days we employed the most ingenious devices to counteract what we *knew* was the reprehensible desire to suck. Elbow splints that prevented the child from bending his elbow and putting his thumb in his mouth—at the risk of producing a stiff elbow; adhesive plaster wound round the offending thumb—disgusting as that became after a few hours *in situ*; applications of quinine solution—though before long the baby learned to take the bitter with the sweet and lick it off; a complicated maze of metal rings draped around the thumb—all these were tried, and usually found wanting. The meanest trick I ever saw played consisted in strapping a short piece of rubber tubing along the length of the thumb in order to introduce a mouthful of air and so spoil the solid satisfaction of sucking that every smoker understands and enjoys so thoroughly.

#### *The Pendulum Swings Back*

But time marches on, and, without stopping at any intermediate point in the quadrant, we have ridden the pediatric pendulum back to the other extreme of the arc. What now are the proper procedures with regard to feeding, elimination and thumb-sucking?

#### *“Demand” feeding*

Instead of the regular two, three, or four hour feedings, gradually merging into three



meals a day, some authorities are now advocating the same practice that Grandma was condemned for following—only now it is given the dignified name, “demand,” or “self demand” feeding. The baby is to be offered a feeding every time he “demands” it by crying—although it is quite possible that he may be crying for some of the many other reasons that make babies cry. What this constant attendance upon the baby’s whims may do to the long-suffering mother’s rest and sleep is not considered. While many of us had long since relaxed our rigid insistence upon a fixed amount of food at a given time, this complete abandonment of any schedule whatever, letting the chips (and the mothers) fall where they may, is an example of extremism that should receive careful study before it is accepted.

#### *“Natural” elimination*

The current attitude toward feeding, however, is nothing compared to the way we are now urged to toss aside all attempts at what the advertisers delicately allude to as “regularity.” We are assured that it frustrates a baby to be held to any elimination schedule whatsoever; that in order to grow up completely normal and uninhibited he must be permitted to evacuate any time he feels like it. A well pinned diaper is relied upon to protect the rest of the family, the furniture and the floor. The fact that the diaper may fail to protect the baby’s buttocks from excoriation is not to be taken seriously, we are assured.

One thought occurs to the unprejudiced pediatrician: At what time *should* we begin to try to get the baby into the habit of daily evacuation such as almost all physicians recommend, even today, for older children and adults? Should we start when the child is 2 or 3 years old, or wait until he is still older? When do regular habits of elimination cease to frustrate, and become salutary and desirable? Ultra-modern pediatrics is silent on this point—at least I have found no specific answer to the question.

#### *Uninhibited thumb-sucking*

Our condemnation of thumb-sucking was so whole-souled, so assured, so unanimous, that any doctor who ten years ago had had the temerity to endorse, much less encourage, the practice would have been laughed to scorn. Yet within these few short years the pendulum has swung back in regard to thumb-sucking as it has in the other two in-

stances. It is now stated categorically that the denial of thumb-sucking spells frustration, and that virtually every personality defect can be traced back to the time when the youngster was denied the divine right of suction, whether upon breast, rubber nipple, thumb, or—at last coming back into its own—the medically abhorred sugar tit. It is not difficult to document this statement with imposing references to current literature.

#### *Justification for Change*

An interesting point in all this discussion is that there was real justification for each of these complete about-faces. Grandma and her generation *were* overindulgent in their attitude toward each of these three childhood functions. Hit-or-miss methods of feeding, with frequent recourse to anticolic “yarbs”; neglect of bowel training, punctuated by unjustified dosing with calomel and castor oil; toleration of full-time sucking of anything within the baby’s reach—all were medically indefensible. Pediatricians were justified in recoiling, although they can hardly be excused for the extremes to which they were carried. Their despotic insistence upon absolute adherence to prescribed rules and formulas simply gave the nod to the orgy of self determination that today threatens to make pediatrics more than slightly ridiculous in the eyes of both physicians and laymen.

#### *The Middle Ground*

Somewhere between these two extremes, however, lies a middle ground. Can’t we find it, instead of swinging back and forth, pendulumwise, every generation or two? If so, perhaps we can make real progress in these three phases of child management, and stop going round in a circle that leads to no fair goal.

I would like now to outline what I believe is a better way. I give it in detail not because I think it is the only way, but because it represents one man’s attempt to be reasonable and fair with mothers. For the last time I will use the headings *feeding*, *elimination*, and *thumb-sucking* in developing my thesis—which is that common sense and moderation are just as commendable and as possible in pediatrics as in any other branch of medicine, or in life itself.

#### *Feeding*

Feedings need be neither hit-or-miss, nor yet mathematically computed. The quantity

to be allowed at a feeding can be left to the infant's own appetite. Since we have no means of accurately determining the loss of heat and fluid through the various emunctories, not even a "bomb calorimeter" would enable us to prescribe exactly, whereas the baby himself has a far more satisfactory self-adjusting gauge—his appetite.

Like any other scientific gauge, however, appetite ceases to be reliable when it is tampered with. If anyone doubts that it can be tampered with, let him take a sundae, or a cup of chocolate with a slice of layer cake, half an hour before his next meal. The infant's appetite is similarly upset when he has a nipple thrust into his mouth every time he cries, whether he is hungry or not.

It is noticeable that if the baby is started on "demand" feeding, he soon regulates his own schedule and adheres to it pretty faithfully thereafter, allowing leeway of perhaps a half hour or so. I believe that I save the mother a rather trying period of waiting, however, when I suggest that, until her child establishes his own routine, she employ a three or four hours interval, as the baby's wants suggest. He is quite as ready to accommodate himself to such a routine as the rest of the family are to their three meals a day schedule.

### *Elimination*

My feeling is that, whereas it is negligent and unsanitary to allow a child to soil his diapers at all hours of the day and night any longer than necessary, we formerly encouraged the mother to place undue emphasis on the importance of the daily movement. I have found it easy to establish regular stool habits quite early, if the relative *unimportance* of the matter is explained to the mother.

I like to start what I call "stool training," if the mother agrees to try it, before the end of the child's first month. Immediately after each of the three daily feedings, the mother inserts a piece of soap the size of her little finger into the baby's rectum, and immediately afterwards places a so-called "lap chamber" against his buttocks, as he lies on his back on her lap. Within a few days the soap stick can usually be dispensed with, the pressure of the chamber against the buttocks being sufficient to stimulate the movement. The mother is taught not to take the matter too seriously. If the baby refuses

to cooperate, she may give up the attempt at any time.

I find that this method, while by no means universally successful, works in the majority of instances. As the child gets older, the procedure changes to a twice-a-day routine which becomes his permanent habit, thus effectively forestalling constipation. Though I cannot claim that all babies thus trained are free from frustration, I have never had any reason to believe that they were any more neurotic than youngsters who are allowed to soil themselves, with no attempt at regulation, until they are old enough to be ashamed.

### *Thumb-sucking*

I readily admit that our earlier fulminations against thumb-sucking, and the orthodontal difficulties it might produce, were too extreme. Yet it is not difficult to imagine the effects of the leverage produced on the infant's superior and inferior maxillae when the forearm acts as the long arm of the lever, the thumb or finger as the short arm, and the front of the lower jaw as the fulcrum. Furthermore, it is impossible to sterilize the pacifier effectively, or the thumb at all.

Nevertheless, we have all seen thumb-sucking infants who grew up to have beautifully regular teeth; and, since we pediatricians have at least partially cleaned up America's milk supply, colitis has become increasingly rare, despite continuation of the unsanitary habit of thumb-sucking. Our reluctance to admit these facts made us responsible for one of the most common household tragedies of yesterday, and even of today—namely, the *increase* of thumb-sucking, caused by the nervous nagging of parents whose efforts to break the child of his habit simply confirmed it, and kept him from curing himself.

I prefer the golden mean in this instance as in the other two. For years I have tried to convince worried parents that they were doing far more harm than good when they nagged or resorted to the various gadgets that have made life miserable for so many children. On the other hand, I firmly believe that the dentists and orthodontists are on firm ground when they warn us that thumb-sucking, while not the sole cause of mal-occlusion and other oral deformities, is a potent factor in the etiology of many of them. I am frank to say, therefore, that I strongly oppose what I consider an unnecessary, unhygienic, and often harmful indulgence. I



do what I can, short of emotional harm to the child, to help him discontinue the habit. Better still, I do my best to keep him from starting it in the first place.

I suggest that the mother gently remove the thumb or finger from the baby's mouth when he first begins placing it there after a feeding or when he is going to sleep—always cautioning her against agonized admonitions and irritated handslappings. If the habit has become fairly well established, I do not hesitate to advise a simple elbow cuff extemporized from a cereal box. It should be loose enough to permit the elbow to bend, but not enough to allow the hand to be brought to the mouth. This device should be used only as the mother finds necessary, and always as a help, not a punishment.

These simple measures may be expected to fail, of course, if the child has resorted to the habit out of loneliness, neglect, boredom, jealousy, unhappiness, or from some other cause. In that case, the cause should be removed and the habit given a chance to disappear spontaneously. After that has been done, I believe that it is perfectly justifiable, and sometimes really necessary, to give the additional help I have suggested. The child sometimes needs reinforcement in breaking a habit that has become almost mechanical. In fact, he may even welcome a little reminder that carries no stigma of reproach or punishment that he can resent.

#### *Summary*

Pediatrics has gone from the extreme of untrammelled license to the opposite extreme of meticulous regimentation. Finally, it has swung back to the starting point.

I believe that the best course lies somewhere between these two extremes, and offer a possible solution. I urge every pediatrician and family physician who deals with children to chart a sensible course for his patients and their mothers, relying on his own good sense and experience rather than on the latest pediatric fads and fashions.

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## THE ASSOCIATION OF MIGRATORY THROMBOPHLEBITIS WITH CARCINOMA

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The fact that a relationship exists between visceral carcinoma and multiple thrombophlebitis was recognized as long ago as 1861. Too little emphasis has been given to this relationship, however, and it is still not common knowledge.

The earliest recorded recognition of the relationship between multiple venous thrombosis and carcinoma is credited to Trousseau<sup>(1)</sup>, who said:

"When you are undecided about the nature of a disease of the stomach—when you hesitate between a chronic gastritis—a simple ulcer and a carcinoma, a phlegmasia alba dolens occurring in the leg or arm will put an end to your indecision and you will be able to assert positively that a carcinoma is present. I have shown you analogous cases in my wards and I have asked you to notice that this obliterative phlebitis did not pertain exclusively to carcinoma of the stomach and that it might occur with cancer affecting any internal organ whatsoever."

#### *Incidence and Characteristics*

Apparently very little was written on this subject until the 1930's, when reports began to appear<sup>(2)</sup>. Interest then dwindled, and it has only been recently that more articles on this subject have been published<sup>(3)</sup>. To date, 56 cases of multiple thrombophlebitis associated with visceral carcinoma, including the 4 reported here, have been recorded (table 1). In table 2 the cases are classified according to the primary sites of carcinoma.

In 1938, Sproul<sup>(3a)</sup> analyzed 4,258 autopsies performed on patients with carcinoma, and found that multiple thrombosis was present in 31.3 per cent of the cases of carcinoma of the body or tail of the pancreas. With lesions of the head of the pancreas, the incidence of multiple thrombophlebitis was 9.7 per cent; of the lung, 2.5 per cent; and of the stomach, 1.3 per cent. Kenney<sup>(3b)</sup>, in 1943, reached similar conclusions on the basis of a smaller

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**Table 1**  
**Reported cases of Multiple Thrombophlebitis Associated with Visceral Carcinoma**

Author	Date	No. Cases	Primary Site of Carcinoma
Osler & McRae <sup>(2a)</sup>	1900	1	Stomach
Winter <sup>(2b)</sup>	1931	1	Pancreas
Thoenes <sup>(2c)</sup>	1932	3	Pancreas
Smith <sup>(2d)</sup>	1932	1	Pancreas or stomach
Umlauf <sup>(2e)</sup>	1933	3	Body of pancreas (2) Lung (1)
Moser <sup>(2f)</sup>	1933	1	Stomach
James & Matheson <sup>(2g)</sup>	1935	3	Lung (1) Stomach (2)
Warner & Dauphinee <sup>(2h)</sup>	1936	1	Lung
Sproul <sup>(3a)</sup>	1938	12	Body or tail of pancreas (5) Head of pancreas (3) Lung (2) Stomach (2)
Kenny <sup>(3b)</sup>	1943	9	Body or tail of pancreas (9)
Cooper & Barker <sup>(3c)</sup>	1944	4	Body or tail of pancreas (1) Lung (1) Gallbladder (1) Undetermined (1)
Case Record, Mass. Gen. Hosp. <sup>(3d)</sup>	1947	1	Body of pancreas
Stahl and Stephan <sup>(3e)</sup>	1947	3	Lung (1) Pancreas (1) Stomach (1)
Jennings and Russell <sup>(3f)</sup>	1948	2	Body and tail of pancreas
Baum, Baum, and Hermann <sup>(3g)</sup>	1948	1	Stomach
Edwards <sup>(3h)</sup>	1949	6	Body or tail of pancreas (4) Stomach (1) Gallbladder (1)
Gross, Jaehning, and Coker	1951	4	Lung (2) Stomach (1) Undetermined (1)

series of cases. It is evident that a definite relationship exists between these two conditions, especially when the body or tail of the pancreas is the primary site of carcinoma.

Thrombophlebitis associated with visceral carcinoma is apparently not the same as that which occurs in the cachectic state, nor are the veins invaded or surrounded by tumor tissue. This migratory thrombophlebitis may involve any vein—large or small, deep or superficial—in the trunk, extremities, or viscera. It is manifested by the appearance of classical signs of thrombophlebitis which may affect any number of venous segments, and which tends to persist and recrudescence.

Individuals who have this syndrome are apt to be in the older age group and may or may not present other symptoms. This syndrome may be suspected when thrombosis of a single vein occurs; but if migration does not take place in several weeks, this diagnosis is unlikely.

#### *Illustrative Cases*

##### *Case 1*

A 55 year old white man entered the North Caro-

lina Baptist Hospital with the chief complaint of cough and fever. He stated that he had been in excellent health until three months prior to admission, when cough and malaise first developed. A month later, the cough increased in severity, and bilateral chest pain appeared. Treatment with penicillin and streptomycin produced slight improvement, but the patient began having soreness in the right thigh and both legs. About two weeks prior to admission, migratory pains appeared in his ankles, legs, thighs, knees, hands, forearms, and elbows. These were accompanied by swelling, pain, and redness. The cough became more severe, and he began bringing up about one cupful of mucoid sputum a day. No history of hemoptysis was obtained.

On physical examination the blood pressure was found to be 120 systolic and 80 diastolic, the pulse 130, the temperature 101.2 F, respiration 25. Pitting edema and evidence of thrombophlebitis were noted in all his extremities at one time or another during his hospital stay. A few rales were heard in both lung bases, which were dull to percussion. Examination of the heart revealed a gallop rhythm and tachycardia. The liver edge was felt 2 cm. below the right costal margin; no other abdominal masses were palpated.

A chest film revealed emphysema, non-specific pneumonitis, and moderate cardiac enlargement. A rather severe anemia developed while the patient was in the hospital, the hemoglobin falling from 11.0 to 7.7 Gm., and the white cell count ranged from 10,000 to 40,000. The nonprotein nitrogen rose from 33 to 96 mg. per 100 cc.

In spite of anticoagulant therapy and elastic



Table 2  
Primary Sites of Visceral Carcinoma Associated  
with Multiple Thrombophlebitis, in order  
of Frequency

Site	No. Cases
Pancreas .....	33
Body or tail .....	24
Head .....	3
Unspecified .....	6*
Lung .....	9
Stomach .....	10†
Gallbladder .....	2
Undetermined .....	2
Total .....	56

\*Including Smith's case<sup>(2d)</sup>

†Not including Smith's case<sup>(2d)</sup>

bandages, the thrombophlebitis continued, and gangrene of the left foot developed. Priapism followed thrombosis of the dorsal vein of the penis. The patient became progressively worse, and expired on the nineteenth hospital day. The clinical impression was that he had migratory thrombophlebitis associated with a visceral carcinoma, probably in the lung or pancreas.

Autopsy disclosed moderately advanced carcinomatosis with involvement of both lung fields, the liver, the hilar lymph nodes, the mediastinum, the adrenal glands, and the brain. Microscopical examination showed the tumor to be an adenocarcinoma which contained a moderate amount of mucin. It was the pathologist's opinion that the primary site was the lung. Thrombophlebitis was found in the prostatic veins. There were infarcts of the lungs and spleen, and gangrene of the left foot. Sections of the iliac and other arteries were made but no arterial lesions were demonstrated.

### Case 2

About one year prior to admission, a 55 year old white man noted swelling of the right arm. Biopsy of a right axillary node revealed metastatic adenocarcinoma. His course was slowly downhill, his only symptoms being dyspnea, weakness, and a weight loss of 50 pounds. Two months prior to admission, he began having migratory pain, tenderness, redness, and swelling of all his extremities.

Physical examination revealed a blood pressure of 130 systolic and 90 diastolic. The temperature was 100.2 F, the pulse 110, and respiration 28. The superficial veins of the chest and abdomen were prominent. There were discrete, non-tender nodes in both axillary and cervical regions. The right shoulder and anterior surface of the upper chest were red, warm, and tender. The heart was slightly enlarged to the left. Fine, moist rales were heard in both lung bases. The liver edge was felt 3 cm. below the right costal margin. Edema of all extremities and early gangrene of the left foot were present.

The laboratory studies were not remarkable, except for the finding of moderate anemia.

The patient died less than seventy-two hours after admission. Autopsy showed widespread thrombosis of both large and small veins and arteries, especially in the lungs. Microscopically, active recanalization was seen in numerous thrombosed vessels. Arterial lesions of the extremities were not demonstrated.

There was marked carcinomatosis, with involvement of the left adrenal and of the skin, pericardium, pleurae, peritoneum, trachea, bronchioles, lungs, myocardium, diaphragm, liver, peripancr-

atic tissue, gallbladder, esophagus, colon, mesentery, ribs, vertebral marrow, meninges, and lymph nodes.

The tumor was an extremely malignant adenocarcinoma in which mucin was occasionally present in small amounts. It was felt that the tumor arose from a bronchiole, but because of the widespread metastases it was impossible to be certain of its origin.

### Case 3

A physician's wife, aged 77, had phlegmasia alba dolens in the right leg at the age of 37, after childbirth. This was followed by recurrent episodes of "phlebitis" in the leg over a period of years. About one year prior to admission she first noticed that her left leg was painful, tender, red, warm, and swollen. A few days later, the process involved her upper extremities in a migratory fashion. Since that time she had had repeated episodes of migratory thrombophlebitis, which usually lasted ten days to two weeks. Until four months prior to admission her only other symptom was weakness. At that time, however, she began having moderately progressive nausea and vomiting. She had lost about 50 pounds in weight during the year prior to admission. There was no history of hematemesis, melena, or jaundice. Because of an associated anemia, she had been given iron, liver and blood transfusions.

Physical examination revealed the blood pressure to be 140 systolic, 85 diastolic, the temperature 98.8 F, pulse 96, and respirations 20. Except for the finding of a mild phlebitis of the right forearm, physical examination was not remarkable. The blood count showed an anemia, with a hemoglobin of 8.5 Gm. and a red cell count of 3,210,000. Otherwise, laboratory studies were not significant.

Shortly after admission the patient's thrombophlebitis flared up, but subsided after ice packs were applied locally. Barium study revealed a filling defect of the stomach, a hiatal hernia, and a duodenal diverticulum.

The patient was subjected to an abdominal operation, which disclosed a nodular mass involving the terminal two thirds of the stomach. This mass was fixed to the pancreas and was friable. No hepatic involvement was seen. A gastrojejunostomy was done, and one month after operation, the patient was getting along relatively well.

### Case 4

A 34 year old white man was in good health until eight weeks prior to admission, when he began noticing recurrent migratory pains in his legs, back, and shoulders. These were moderately progressive and were associated with malaise. Four weeks prior to admission he began having fever, and a frank thrombophlebitis of his right leg developed. This progressed until gangrene of the right foot appeared, and he was admitted to this hospital.

The past history revealed that sixteen years previously, following a fracture of the pelvis, varicose veins developed in the right leg. These were later treated by venous ligation.

On physical examination, the blood pressure was 150 systolic, 90 diastolic, the temperature 101 F, pulse 120, respiration 20 per minute. The right leg was tender, hot, edematous, and purple. The right foot and ankle were cold up to a point midway on the calf. A large bullous lesion was present on the ankle. The arterial pulses were not felt in the right leg or foot, but could be felt in the other extremities. There was thrombophlebitis of the thoracoepigastric veins on the right, with edema of the right chest. Expansion of the thorax was decreased on the right, and there was diminution of the breath

sounds on that side. No rales were heard. The remainder of the physical examination was not remarkable.

Laboratory studies revealed the hemoglobin to be 9.5 Gm., the red cell count 3,720,000, the sedimentation rate 28 mm. per hour, and the white cell count 13,300, with a normal differential. The non-protein nitrogen was 62 mg. per 100 cc., and the remainder of the laboratory data were within normal limits. Roentgen studies revealed pneumonitis of the left upper lung field, right pleural thickening, elevation of the right diaphragm, a questionable soft tissue shadow in the right superior mediastinum, and osteolytic lesions in several ribs and vertebral bodies.

The thrombophlebitis progressed, involving the left leg as well as the upper extremities, where the thrombosed veins could be easily palpated after twenty days. The gangrene of the right leg also progressed, in spite of anticoagulant therapy and the applications of ice packs to the leg.

Biopsy of one of the rib lesions revealed metastatic adenocarcinoma. The patient is living, though moribund, at the time of this writing, and the primary site is not known.

### *Etiology*

The occurrence of venous thrombosis in the vicinity of a carcinomatous organ which encroaches on the vein is readily understandable, but the etiology of multiple venous thrombosis in veins distant from the site of a malignant growth remains obscure. The pathologic picture of this thrombophlebitis is indistinguishable from that which occurs following surgery and other prolonged illnesses, where stasis plays the major role. Marked inflammatory changes are found occasionally, but usually the inflammation is of a low degree. Moderate fever usually accompanies the thromboses. The term "thrombophlebitis" is probably more proper than "phlebothrombosis" in this syndrome.

This type of venous thrombosis is not related to pressure imposed by a tumor mass, to direct invasion of tumor cells, to general cachexia or debility, to dehydration, or to congestive failure with stasis. Many cases have been given thorough pathologic study, but tumor cells have not been demonstrated in or near the veins.

It appears, then, that the etiology of this condition lies in some alteration of the clotting mechanism itself. The exact nature of this alteration is not known, but several interesting theories have been suggested and deserve investigation. Involvement of the liver probably cannot be incriminated, because this syndrome may occur when no hepatic metastases can be demonstrated, and may not occur in other conditions such as primary carcinoma of the liver, or hepatic abscess.

Sproul<sup>(3a)</sup> cites many bits of evidence which

indicate that a definite relationship exists between malignancy and the coagulation of blood, and that coagulation is enhanced in patients with carcinoma. Because of this general tendency to a decrease in the clotting time, Bock and Rausche have offered a method of testing the coagulation power of blood as an aid in the diagnosis of cancer<sup>(3a)</sup>.

### *Differential Diagnosis*

The problem of differential diagnosis is not an easy one. When migratory thrombophlebitis occurs, it is first necessary to eliminate the usual causes of thrombophlebitis due to stasis. The presence of masses, sources of pressure on the veins, varices, blood dyscrasias, and the like must be ruled out by a careful history, physical examination, and laboratory studies. Before the diagnosis of idiopathic thrombophlebitis is made, thromboangiitis obliterans and visceral carcinoma must also be excluded<sup>(3b)</sup>.

The thrombophlebitis which results from thromboangiitis obliterans and that which is associated with visceral carcinoma closely resemble each other. The former condition is more common in younger persons who almost invariably use tobacco, and the migrating thrombophlebitis which it produces is not as rapid in its progression nor as extensive as that associated with carcinoma. The arteries may or may not be involved at the time the patient is seen, but biopsy of a vein often shows a characteristic pathologic picture<sup>(3b)</sup>. An additional helpful diagnostic point in thromboangiitis is the difference in the arterial blood pressure between the two arms or two legs.

So-called idiopathic thrombophlebitis migrans usually occurs between the ages of 25 and 50 years, the average age being about 40. It affects men about three times as commonly as women, and occurs in otherwise healthy adults<sup>(4)</sup>. A clear cut clinical differentiation between this condition and thrombophlebitis associated with visceral carcinoma is impossible unless the malignant process can be demonstrated.

A review of the laboratory data available in the reported cases of thrombophlebitis associated with carcinoma reveals no constant abnormality, and none that appears to be of specific value. These data include determinations of the sedimentation rate, bleeding time, clotting time and prothrombin time, platelet counts, and liver function studies.



### Treatment

Treatment of thrombophlebitis associated with carcinoma is unsatisfactory. The usual procedure of anticoagulant therapy, the administration of drugs to block the sympathetic nervous system, and venous ligation should be used according to the physician's judgment, for the danger of death from pulmonary embolism is real. Edwards<sup>(3h)</sup> has stated that treatment is secondary in importance to the search for the responsible neoplasm, and suggests the employment of all diagnostic procedures which might be useful, even to the extent of exploratory laparotomy, if necessary. Obviously, the pancreas, lung, stomach, and gallbladder should be investigated.

The occurrence of this syndrome is apparently not dependent on the presence of metastases. Surgical removal of the tumor before metastases appear will prevent the occurrence of the syndrome, but it is not known whether this will effect a cure after the migratory thrombophlebitis has begun.

### Summary

The syndrome of migratory thrombophlebitis associated with carcinoma is discussed, and the available case reports of this syndrome are tabulated.

Four new cases are added, bringing to 56 the total reported to date. Two of these patients had adenocarcinoma of the lung proven to autopsy; one had adenocarcinoma of the stomach proven at operation; and one had metastatic adenocarcinoma of the ribs proven by biopsy, the primary site being undetermined. One of the patients with carcinoma of the lung presented a rather unusual manifestation of thrombophlebitis—that of priapism.

The most common sites of visceral carcinoma associated with migratory thrombophlebitis are, in order of frequency, the body and tail of the pancreas, the lung, the stomach, and the gallbladder.

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## OPERATIVE ASPECTS OF FEMALE STERILITY

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From the surgeon's point of view, at least three aspects of the problem of female sterility deserve consideration: (1) the necessity for preserving fertility, if possible, when necessary abdominal operations are performed on girls and young women; (2) the undesirability of treating infertility by surgical means without ascertaining the cause of the condition; (3) the occasional value of operative techniques for the relief of sterility in a few carefully studied patients.

### The Necessity for Preserving Fertility

In performing abdominal operations, surgeons are apt to forget the future desires of their female patients for children. During laparotomy it would be well for the surgeon always to ask himself what effect the removal of any particular structure might have on the patient's future ability to bear children.

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### *Unwarranted Operations for Infertility*

In our study of more than 500 childless couples<sup>(1)</sup>, we have encountered many cases in which operative procedures have been performed without any effort to determine the true cause or causes of the couple's infertility. A recent example is a case in which the wife, after a casual pelvic examination had been performed, was advised that a uterine suspension would probably relieve her infertility. This procedure was done, but when we saw her four years later she was still childless, and still had a retroverted uterus. Upon complete examination of the couple, it was found that the husband had azoospermia as a result of partial bilateral testicular atrophy following mumps orchitis.

We cannot censure too strongly this practice of resorting to surgery as a panacea for infertility. The condition is seldom relieved by suspension of the uterus, dilatation and curettage, insertion of a stem pessary, or removal of physiologic cysts of the ovary. The effects of uterine displacements usually can be overcome by changes in coital technique, not by suspension of the uterus. In the patient with a normal menstrual history, curettage gives no information that cannot be obtained by endometrial biopsy, which is an office procedure. In patients with true cervical stenosis, repeated dilatations in the office are far better than a traumatic dilatation performed under anesthesia. Fortunately, in modern practice the stem pessary has been relegated to the museum, where it properly belongs. There is seldom any justification for removing an asymptomatic, slightly enlarged ovary in a young woman. Most functional ovarian cysts will disappear under observation. There is little reason to believe that a "prolapsed" ovary functions any less well than an ovary in its normal position.

### *The Occasional Value of Operative Techniques in Suitable Cases*

Under what conditions should the operative treatment of female infertility be considered? An absolute prerequisite is adequate assay of the husband<sup>(2)</sup>. This should include, as a minimum, a complete history, physical examination, and seminal examination. If the husband's fertility is found to be unimpaired, it must be remembered that surgical procedures can be of no value in a woman who is not ovulating. A complete evaluation of the wife's history, together with a physical examination, pelvic examination, postcoital

test, tubal test, endometrial biopsy, and basal temperature record<sup>(3)</sup>, is necessary to avoid useless operations.

Chronic cervicitis and endocervicitis, tubal occlusion, endometriosis, and uterine myomas are the usual indications for operative intervention.

### *Cervicitis*

Most patients with severe chronic cervicitis and endocervicitis will have repeatedly negative postcoital examinations. When the lesion is not too extensive, cauterization may be of some value. In other cases we have resorted to conization of the cervix with good results. However, cervical surgery is not the complete answer to the problem of the patient with negative postcoital examinations. A normal hormonal balance is also necessary, and the test must be performed at the proper time in the menstrual cycle.

### *Endometriosis*

Endometriosis is not an uncommon finding in sterile women, although the exact relationship between the two conditions is not well understood. Many young women have become pregnant following conservative surgical treatment of their endometriosis<sup>(4)</sup>. This approach consists in the removal of as many implants as possible, with the preservation of as much normal ovarian tissue as possible. An operation should not be done in these cases, however, unless all the other factors which reduce fertility in the couple have been resolved.

### *Uterine myomas*

When the survey of a childless couple is completely negative except for the presence of uterine myomas, myomectomy may be considered. Myomas are probably much more important in causing early abortion than as a cause of infertility. However, the patient who has repeated miscarriages is sterile as far as the final result is concerned.

### *Tubal occlusion*

In some couples the only fertility-reducing factor is occlusion of the fallopian tubes. That many obstructions are relieved by the tubal test itself is proved by the pregnancies which have occurred following this procedure. The Rubin's test, or carbon dioxide insufflation of the tubes, is the procedure usually done to evaluate tubal patency. *The results of this test should be interpreted only on the basis of positive manometric changes or the roentgenographic demonstra-*



*tion of air beneath the diaphragm, and not by subjective means.* In our opinion, hysterosalpingography is a more definitive method, as it not only assays tubal patency but gives exact information concerning the site of obstruction, if any is present. The fractional injection of a contrast medium with repeated spot films, is not as satisfactory a method as injection of the material under direct fluoroscopic vision. This latter method more accurately determines the site of obstruction, permits the use of a minimum amount of contrast medium, and greatly reduces the possibility of venous injection.

In patients with proven tubal occlusion, repeated tubal tests with either of the previously mentioned techniques may be employed. It is probably best not to do more than one tubal test a month, and always to perform the test three to seven days after the complete cessation of uterine bleeding. When cornual obstruction is present, one is probably not justified in repeating the procedure more than three times unless there is evidence of progress in relieving this obstruction. It is our practice to re-evaluate the site of the obstruction, if it is still present, by hysterosalpingography immediately following the second or third carbon dioxide insufflation.

In patients who have an obstruction of the tubes distal to the cornua, the plan of treatment varies with the circumstances. One is not justified in doing repeated Rubin's tests in patients with hydrosalpinx, as these may increase tubal congestion or precipitate an acute inflammatory process. Furthermore, there is very little possibility of creating enough pressure to open such a tube. In other patients with isthmic and fimbrial obstruction *one is justified in repeating tubal tests as long as progress is being made.* It must be remembered that one cannot hope to relieve unilateral obstruction, regardless of its site, by tubal tests. Their effects depend solely upon the artificial increase of intraluminal pressure, and where one tube is patent it is difficult, if not impossible, to produce pressure changes in the closed tube.

When tubal tests offer no further hope of improvement, one may consider the advisability of an operative approach to the tubal obstruction. Not all of these patients are candidates for plastic procedures. The necessary general requirements, in addition to complete normalcy of the husband, are (1) that the

patient be a good operative risk; (2) that she have a better than average psychosomatic outlook; (3) that both husband and wife have a thorough understanding of the problems involved and of the low percentage of success.

Cornual occlusion, for obvious anatomic reasons, is more difficult to approach surgically. Following reinsertion of the fallopian tube into the uterus, the thick uterine musculature and the scarring which results from uncontrollable minute hemorrhages tend to reduce the lumen of the tube. Greenhill<sup>(5)</sup>, following a comprehensive evaluation of operative results in tubal plastic procedures, reported that less than 4.4 per cent of the operations were followed by pregnancy—one baby for every 22.5 operations. There is some reason to believe that newer techniques<sup>(6)</sup>, aimed at the prevention of scarring, may lead to better results. Metal tubes, catheters, wires, and plugs have been used. More recently we have used polyethylene tubing threaded through to the cervix. This is removed after a period of two to three months. In our series, the prognosis for pregnancy is still poor.

In hydrosalpinx, the chief problem is not the restoration of patency, *but the impossibility of restoring normal ciliary action or peristaltic movements destroyed by infection.* The usual procedure involves removing the diseased portion of the tube and doing a circumcission type of plastic procedure on the proximal end, if possible. Another technique<sup>(7)</sup> leaves the tube *in situ* and opens a semicircular window in the tube close to the ovary. It is particularly important in this group of patients to be certain there is no active infection in the pelvis, since the incidence of subsequent ectopic pregnancy is high.

The technical problems are simpler in patients with uncomplicated isthmic and fimbrial occlusion. The procedure of choice depends upon the site of obstruction and the etiologic factors. The exact site of obstruction can be determined at the operating table under direct visualization by injecting air into the uterus and the tubes from below. This procedure allows for the utilization of as much patent tube as possible, and minimizes the blind probing which leads to further trauma and the possible creation of false passages.

Some writers have recommended the implantation of ovarian tissue in the uterine

wall when the fallopian tubes are totally destroyed. The extremely low incidence of subsequent pregnancies, together with the major postoperative complications such as chronic pain, menstrual disturbances, and the likelihood of uterine rupture during pregnancy (should this occur), is enough to condemn the procedure.

#### Summary

In performing abdominal operations on girls and young women, the surgeon should take every precaution to avoid any trauma of the procreative functions.

An operation should not be offered as a panacea for sterility without an investigation of the entire complicated problem. Operative technics may relieve sterility in a few well-chosen patients, but even in these cases the prognosis is poor.

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**Causes of Fear Among Obstetric Patients**—The experiences of life over the years reveal that most of the fears which beset everyone from time to time are needless. Many years of obstetric practice convince me that one of the most important accomplishments of the obstetrician is his ability so to guide his parturient patient through her antepartum period that she shall approach the time of her delivery unafraid, rather "as one who wraps the drapery of his couch about him and lies down to pleasant dreams." The practice of the obstetric art requires much time and infinite patience, and thrice blest is he who has been so fortunate as to have also had precious training and experience in clinical psychiatry. It might be well to require that a certain amount of the time of the obstetric and gynecologic residency be given to this branch of medical study as is done in pathology in relation to the specialty.—Bloss, J. R.: Causes of Fear Among Obstetric Patients, J.A.M.A., 144: 1358 (Dec.) 1950.

Among the 410 persons who died from tuberculosis in Minnesota in 1949, 259 were 50 years or older, of whom 129 were 65 years or over. Apparently the tubercle bacillus is making its last stand in old men. Of the 259 persons of 50 years or older who died in 1949, only 72 (27.8 per cent) were women. J. Arthur Myers, M.D., Journal-Lancet, April, 1950.

## THE PROBLEM OF INFECTIOUS DISEASES IN EARLY PREGNANCY AS A CAUSE OF CONGENITAL MALFORMATIONS

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GASTONIA

and

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During July and August, 1940, a severe epidemic of rubella occurred in New South Wales, Australia. The usual number of cases of rubella occurring annually among school children in that state fluctuates from 200 to 3,000. In 1940, however, 30,000 children were absent from school because of German measles<sup>(1)</sup>. Dr. McAlister Gregg<sup>(2)</sup> reported that an unusual number of congenital cataracts appeared in Sidney, Australia, in the first half of 1941. A maternal history of rubella during pregnancy was obtained in 68 out of 78 cases, and he suggested this to be the responsible etiologic factor<sup>(2)</sup>.

This observation has stimulated others to report their findings, and much information has been accumulated on this subject. Among other maternal diseases which have been frequently mentioned as a cause of congenital malformations are the following: measles, mumps, scarlet fever, influenza, chickenpox, herpes zoster, poliomyelitis, infectious mononucleosis, toxoplasmosis, and syphilis<sup>(3)</sup>. The present study is concerned primarily with rubella, since this disease has received the most publicity.

### *The Incidence and Severity of Congenital Defects Following Rubella in Pregnancy*

In order to implicate any infectious disease occurring in pregnancy as a cause of subsequent congenital malformations, certain epidemiologic studies are necessary. As a result of problems involved in the diagnosis and reporting of such cases, follow-up is difficult. Several types of investigations have been made in an effort to determine the incidence of anomalies following maternal rubella. One method is to seek out congenitally malformed infants and determine

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Table 1

**Maternal Infectious Diseases Believed to Cause Congenital Malformations**

(Based on Replies Received from Fifty-Four Medical Schools)

Disease	Number of Replies Listing It
Rubella .....	38
Any virus infection .....	6
Mumps .....	2
Infectious mononucleosis .....	2
Measles (morbilli) .....	1
Chickenpox .....	1
Toxoplasmosis .....	1

whether there is a history of a maternal infectious disease during pregnancy. This is essentially the pattern of the Australian surveys<sup>(1,4)</sup>. In another type of investigation, all reported cases of rubella have been classified, and questionnaires have been sent to women of childbearing age. Those reporting that the disease occurred during pregnancy were then questioned further. This type of investigation<sup>(5)</sup> has been carried out in limited geographic areas.

The results of each type of survey differ considerably, and each has certain weaknesses. Some investigators have reported the incidence of malformations following maternal rubella in the first trimester to be as high as 88 per cent<sup>(3b)</sup>, while others report an incidence of 33.3 per cent<sup>(5a)</sup>. It is possible that some of this discrepancy may be attributed to a variation in virulence among different strains of the virus. However, all surveys show that the incidence of congenital malformations is higher if the disease occurs in the first trimester of pregnancy.

Another consideration besides the actual incidence of these anomalies is the character and degree of malformation present. In some cases, the defects have been listed as severe feeding problems, delayed eruption of teeth, or delay in sitting, walking, and speaking. Many of these problems could be considered as not too serious. However, other malformations, such as major cardiac abnormalities, microcephaly, microphthalmia, bilateral cataracts, severe deafness, and mental retardation, must be regarded with great concern.

*Where the Responsibility Lies*

It apparently has not been definitely established where the responsibility lies for the management of this problem. Probably many branches of medical science will contribute a share. Such problems as the collection of adequate and sufficient data regarding infectious diseases and the development of im-

Table 2

**Policies of the Fifty-Four Medical Schools Regarding the Management of a Patient Acquiring Rubella in Early Pregnancy**

Policy	Number of Schools
Conservative .....	25
Offer therapeutic abortion .....	11
Recommend therapeutic abortion .....	9
No policy .....	9

munization procedures against such diseases will remain in the field of preventive medicine. Every physician concerned with infectious diseases will contribute by adequately reporting conditions which were formerly considered to be merely a nuisance, such as rubella. The obstetrician's opportunity to contribute his share arrives the moment one of his patients contracts an infectious disease in early pregnancy. Pediatricians, dentists, oculists, cardiologists, and others can participate in determining the extent of the resulting malformation and in carrying out such procedures as may be necessary in their management. Those who are engaged in research may have the opportunity to use information regarding this problem as a step toward determining the causes of other developmental anomalies.

*Results of a Survey Among Medical Schools*

Being particularly interested in the responsibility of the obstetrician in the management of this problem, we have sought opinions from the obstetric departments in seventy medical schools throughout the United States. The heads of these departments were asked to list the infectious diseases occurring during pregnancy which they considered to be the cause of congenital malformations. Fifty-four replies were received (table 1).

According to this survey, rubella occurring in early pregnancy has been accepted in a majority of medical schools to be a cause of congenital malformations. More information will be needed regarding the other diseases before they can be generally accepted as etiologic agents.

*Policy of management*

Another question was: What is your policy in the management of a prenatal patient with this problem? The replies are shown in table 2. Twenty-five out of fifty-four stated that conservative management was their policy. In eleven schools the situation would be explained to the patient, and therapeutic abor-

tion would be offered. We interpret this policy as being less radical than the recommendation of abortion by nine schools. Nine schools have no policy.

If the nine schools which reported "no policy" are included with the conservative group of 25, we may say that 63 per cent of the schools are not radical in their management of this problem. However, the results strongly indicate that opinion and policy are about equally divided between radical and conservative management.

In the replies to the questionnaires, the question of the legal and moral right to perform therapeutic abortion was mentioned several times. One reply advised that legal opinion should be obtained before performing a therapeutic abortion in these cases. In many states, therapeutic abortion can be performed only when the health or life of the mother is endangered by allowing the pregnancy to continue.

In this state the law is as follows: "If any person shall willfully administer to any woman, either pregnant or quick with child, or prescribe for any such woman, or advise or procure any such woman to take any medicine, drug or other substance whatever, or shall use or employ any instrument or other means with intent thereby to destroy such child, unless the same shall be necessary to preserve the life of the mother, he shall be guilty of a felony, and shall be imprisoned in the state's prison for not less than one year nor more than ten years, and be fined at the discretion of the court."<sup>(6)</sup>

### *Summary and Conclusion*

Since 1941, when infectious disease in early pregnancy was first mentioned as a cause of congenital malformations, many observers have reported findings indicating that these earlier observations were correct. However, the data accumulated in later years seem to indicate that the incidence of malformations following such diseases may be somewhat less than was previously suspected.

In an attempt to clarify the role of the obstetrician in the management of this problem, a survey was made among the obstetric departments of 70 medical schools in the United States. Replies received from 54 schools indicated that in most instances maternal rubella occurring in the first trimester of pregnancy is accepted as a cause of con-

genital anomalies. Policies for the management of these cases are about equally divided between conservative and radical methods. It is evident that those who believe therapeutic abortion to be justified consider the problem as a serious one which must be treated as such to avoid the great tragedy of a living defective child, with all its psychologic, sociologic, and economic problems. The question of the legal and the moral right to perform therapeutic abortion is raised. It is evident that much more data must be accumulated before a universally accepted policy will come forth.

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### *Discussion*

**Dr. A. H. London, Jr., (Durham):** Since Gregg's report on the association of congenital cataracts and rubella occurring in early pregnancy, practically all of the virus diseases have been incriminated as causes of congenital malformations. Defects which are known to be hereditary, or which represent only slow development, have been attributed to virus infections during pregnancy. In considering malformations which may have been caused by infections during pregnancy, it is well to consider only those defects in the so-called "rubella syndrome"—that is, cataracts, deafness, mental retardation, microcephaly, and congenital heart disease. Usually at least two of these are found in the same child.

The American Academy of Pediatrics formed a committee for the study of congenital malformations and their relationship to maternal rubella and other infections. This committee was headed by Dr. Herbert C. Miller of Kansas City, and its report was published in *Pediatrics* in February, 1950. Two tables taken from this report are of interest:



**Table 1**  
**Incidence of Defective Infants**  
**Following Maternal Rubella**

	Cases of Rubella	Defective Infants
		No. Percent.
Total .....	331	68 20
First trimester .....	110	41 37

Table 1 shows the incidence of defective infants following maternal rubella as summarized from collected reports. You will notice that where rubella occurred in the first trimester of pregnancy, 37 per cent of the infants were defective.

**Table 2**  
**Incidence of Defective Infants Following Maternal**  
**Infections in Early Pregnancy**

Maternal Infection	Exposed Infants	Defective Infants
Rubeola .....	13	4
Epidemic parotitis .....	24	6
Varicella .....	7	1
Infectious mononucleosis .....	6	3
Poliomyelitis .....	36	2
Total .....	86	16

Table 2 shows the incidence of defective infants born of mothers who had infections other than rubella in early pregnancy. Of particular interest and possible significance is the high percentage (50 per cent) of defective infants born of mothers who had infectious mononucleosis in early pregnancy.

Despite the data collected, it is still not clear and certain that infections other than rubella play a definite, causative role in the congenital malformations. It is to be hoped that more accurate collection of data—particularly collection of data from clinics and obstetricians, who are now acutely aware of this problem and are making careful records of infections occurring during the first trimester—may eventually determine just exactly what part these various infections play.

The peak of epidemics of rubella usually occur in late winter and early spring. Pandemics of rubella usually occur about every eight to ten years. It is clear that children often escape rubella, and that the incidence of rubella in young adults is high. We have no known preventive for rubella. These facts suggest certain long-range prophylactic measures:

1. Expose female children to rubella before the childbearing age.
2. Avoid pregnancy in late winter and early spring months, particularly in pandemic years.
3. Continue efforts to develop an active immunizing agent against rubella.

**Dr. Richard B. Dunn** (Greensboro): If a patient asked us to perform an abortion because she had had rubella in early pregnancy, I wonder how many of us would agree. Fortunately, such cases are rare. If the problem were facing me now, I would in all fairness to the patient answer her question by saying that measles can cause congenital abnormalities. But unless she insisted on an abortion I would feel that she should continue her pregnancy. As soon as an article on the subject gets into *Good Housekeeping*, or the *Woman's Home Companion*. I suppose all of us will have the question asked of us.

I congratulate the authors for presenting this paper, and I heartily agree with them that more time is needed before the problem can be completely evaluated.

**Dr. Hilton D. Haines** (Rockingham): I would like to ask whether there is any possibility that a virus infection in the father at the time of conception

could cause a congenital malformation. I have recently seen two children—one a Mongolian idiot and another with an ano-vaginal fistula—whose mothers had no history of infection during pregnancy. In both cases, however, we were able to establish the fact that conception took place while the husbands were sick with virus pneumonia.

So far as I know, this aspect of the problem has received no consideration.

**Dr. Davis:** Studies by Hotchkiss and McLeod on acute infectious diseases—not virus diseases—have shown that the effect on male fertility is not manifested for a period of four to six weeks. Unless the husband had had the infectious disease four to six weeks prior to conception, I doubt that it would have any effect on the product of conception.

## MEASLES ENCEPHALITIS

### *Report of a Case Following Adequate Therapy with Globulin*

GORDON SMITH, M.D.

SNOW HILL

Many years ago it was discovered that measles could be modified or temporarily prevented by a transfusion of whole blood from individuals who had recovered from an attack of measles. Later it was proved that the placenta and the serum contained measles antibodies, and that 25 or more cm. of immune plasma would provide temporary passive immunity against rubeola<sup>(1)</sup>. Within recent years gamma globulin has been found to possess the antibodies that reflect the immune state in a concentration 25 times greater than normal human plasma<sup>(2)</sup>. Small volumes of this material can be given for the modification of measles. In one series gamma globulin provided complete protection for 79 per cent of exposed patients; modified measles appeared in 21 per cent, and regular measles in none of these given adequate dosages. In the control group 83 per cent developed typical cases of measles, many with complications<sup>(3)</sup>.

Immune serum globulin (human), given in a dose of 3.0 to 3.7 mg. per pound of body weight within the first six to eight days of the incubation period, will modify a case of measles. When complete protection is desired, approximately five times as much should be given early in the incubation period. This passive immunity usually lasts only four weeks, and the dose must be repeated if complete protection is desired and renewed exposure is likely<sup>(4)</sup>.

### *Report of Case*

A 19 month old white girl, weighing 25 pounds, was exposed to measles on March 25, 1949, and was given 87.5 mg. of gamma globulin (human) on April 1, 1949. Mild respiratory symptoms developed, and during the night of April 10 a fine maculopapular rash appeared on the back of her neck and on her abdomen. She was not complaining, and except for the rash appeared perfectly healthy. During the entire day of April 11 the child played normally and happily, and the rash did not progress in intensity.

At approximately 9:30 p.m. that night, while she was lying awake in bed, her father noted that she suddenly became quiet. She was seen to be unconscious and cyanotic, and appeared to be having a convulsion. On examination her temperature (rectal) was found to be 102 F. Her respirations were stertorous and shallow, and at times seemed as if they were going to stop. She was unconscious and moderately cyanotic. A mild measles rash was present on her abdomen, neck, and face. Her head and eyes were turned to the right, and there was nystagmus to the right. The neck was not stiff. Foamy saliva oozed from her mouth.

Generalized fibrillary muscle tremors were present throughout, while the right arm and leg showed gross clonic movements. The right arm and leg were spastic, and resisted passive movement more than the left. Tendon reflexes on this side of body were slightly exaggerated; otherwise, reflexes were normal. The only other positive finding was moderate abdominal distention.

The past medical history was not contributory. She was the second child, and had been delivered without difficulty after a normal labor. She had been immunized against diphtheria, pertussis and tetanus, and had scabies and the usual number of respiratory infections.

At 10:45 p.m. on April 11 she was admitted to the hospital. Laboratory studies revealed a white blood cell count of 6,800, with 50 per cent polymorphonuclear cells and 50 per cent lymphocytes, and a red cell count of 4,600,000, with a hemoglobin of 75 per cent; platelets were plentiful. An uncatheterized specimen of urine showed an acid reaction, a specific gravity of 1.028, no albumin, sugar or red blood cells, and 5 pus cells per low power field. The spinal fluid on the

night of admission was very slightly opalescent and under no increase in pressure. Globulins were normal, and no organisms were seen on direct smear nor on a forty-eight hour culture; however, the fluid contained 140 cells, mostly lymphocytes.

Nembutal suppositories were given to control the convulsions and to reduce the spasticity of the entire body. Streptomycin (0.05 Gm.) was given by hypodermic every four hours. By the next morning (April 12) the measles rash was florid, although the patient seemed better. There were no convulsions, contractions or rigidity. The temperature fell rapidly, reaching normal at 8 p.m. All this day the child played in her crib and seemed to be hungry, although she was more somnolent than usual and made many aimless movements. There was some incoordination. Reflexes were normal. Six cubic centimeters (840 mg.) of gamma globulin were given hypodermically twelve hours after admission.

On the second hospital day another spinal tap was performed. The fluid, which was under no increased pressure, contained 3 lymphocytes and 90 mg. of sugar per 100 cc. The temperature remained normal, and the rash had faded appreciably. Her general appearance was brighter and more normal. Urinalysis was negative.

The patient was discharged from the hospital on the third hospital day, apparently completely well. She was seen ten days later, and on this examination was entirely normal. According to the mother, there have been no sequelae.

### *Comment*

Nervous symptoms occur in about 0.5 per cent of all cases of measles<sup>(5)</sup>, although the incidence seems to be increasing in recent years<sup>(6)</sup>. These nervous symptoms usually appear on the fourth to the sixth day when the rash has begun to fade and the fever has fallen, but the onset may occur at the height of the fever, as in this case. All types of symptoms are produced, depending on the location of the encephalitis. The prognosis for survival is fair, the mortality being 10 to 20 per cent<sup>(7)</sup>. However, many survivors show permanent nervous symptoms and mental defects.

During the past several years many reports in the literature, on the treatment and prophylaxis of measles with the globulins<sup>(8)</sup>,



and many reports of measles complications<sup>(9)</sup> have appeared, but I am unable to find a report of attenuated encephalitis following a prophylactic dose of gamma globulin. Although uncommon, measles encephalitis is extremely serious. I feel that the mildness of this complication in the case reported can be attributed to adequate globulin therapy. If so, modification of measles by this method is justified in all cases.

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**Delay in Diagnosis.**—One definite cause of delay in the recognition of serious psychiatric disorders seems to be the present departmentalization of medical practice which often permits the patient to go from specialist to specialist without adequate opportunity for anyone to survey his total reaction. The gynecologist, for example, is apt to look only at the genital somatic manifestations or dysfunctions of what may be a far reaching disorder of the entire organism. The cardiologist is likely to pay attention to those complaints within his own field, and the otolaryngologist may feel that he has adequately discharged his obligation to the patient if he says whether or not the patient's presenting symptoms may be attributed to a disorder of those particular portions of the anatomy which he is best qualified to explore. The patient frequently steers himself from office to office and has such respect for the narrowness of the particular specialist's field that he is apt to offer only those symptoms which he feels would interest the physician. Somewhere in the process there should be an opportunity to discover that the patient is encountering difficulties in the total functioning of his personality, but that is not always the case and the chance for early treatment may be lost. Sometimes the source of the difficulty lies in over-concern with laboratory findings and a too easy reliance upon them. This occasionally permits the patient to go through the diagnostic mill merely accumulating laboratory data without recognition of his real problem.—Charles W. Miller, Jr.: *The Recognition of Major Psychiatric Disorders by the General Physician*, *Memphis M.J.* 25:138 (September) 1950.

## TECHNIQUE FOR THE ADMINISTRATION OF TOPICAL ANESTHESIA IN ENDOSCOPY

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Oteen

My interest in the subject of topical anesthesia began when one death and several reactions due to topical anesthesia occurred at the Oteen Veterans Hospital. According to Seevers<sup>(1)</sup>, "There are probably more deaths from local anesthetics than from any other single class of compounds in common use today."

After perusing the literature, sending questionnaires to the members of the American Broncho-Esophagological Association, and trying various techniques (drugs singly and in combination), and drug concentrations, we modified our procedure at Oteen. This modification was based on the following conclusions, which are taken from a paper published in 1949<sup>(2)</sup>.

"1. The controlling factors in the development of toxic reactions are total dosage of drug and length of time consumed in applying that dose. Safety can best be attained by using the least amount of the most dilute solution of the least toxic drug compatible with efficient anesthesia.

"2. Cocaine is the drug of choice. Pontocaine has acquired a certain popularity. It was ostensibly developed in the search for a less toxic substitute for cocaine. Pontocaine is, however, more toxic than cocaine, a more active allergen, and more locally irritating. It is, however, cheaper than cocaine."

The procedure which I feel most nearly approaches the ideal from the standpoint of both safety and efficiency is described in detail below. This procedure was developed as a result of our experience in administering 4,493 anesthetics for endoscopic procedures performed at Oteen since 1946. Since it was adopted, we have not had a single reaction to topical anesthesia.

### Description of technique

We found that a 2 per cent cocaine spray was sufficient to lessen the pharyngeal reflex and relax the aditus laryngis. By accurate measurement of the drug solution, before and after spraying, it was found that the average patient required 2 cc. of this solution. A maximum of 4 cc. was used for the

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From the Department of Medicine and Surgery, Veterans Administration, Oteen, North Carolina.

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more sensitive and apprehensive patients. The average amount used in more than 100 cases in which accurate measurements were made was 2.3 cc. It was found that residents had been giving an initial dose of 4 to 6 cc.

Our technique is as follows: A Devilbiss number 127 atomizer is used, as this allows the bottle and bulb to be operated with one hand, leaving the other hand free to hold the tongue initially, and later the laryngeal mirror. Maximum compression of the bulb is avoided until the spray burst can be directed into the aditus under mirror visual control. The patient is advised not to swallow the sprayed material, but to clear his throat and expectorate all excess solution. The soft palate and posterior pharyngeal wall are given several weak bursts in one application. The atomizer tip is then bent to an angle of approximately 90 degrees, and several weak bursts are directed toward the posterior surface of the epiglottis. The patient should now tolerate the presence of the mirror. Under mirror control, repeated weak applications are directed behind the epiglottis until the aryepiglottic muscle fibers relax and a direct view of the glottis is obtained. Several heavy bursts are then directed toward the glottis.

The only sure way of knowing how much solution is used in the above procedure is to measure and record the actual amount used in each case for many cases. Since the patient will spray his own pharynx by coughing, it is drug-sparing to use only weak pharyngeal bursts.

It is now time to instill cocaine directly into the larynx with a syringe and cannula. We use a 3 cc. syringe, to which is attached a malleable silver eustachian catheter. The cannula is so bent for each case as to allow delivery of the solution into the larynx, avoiding contact between the cannula and the epiglottis. A total of 2 cc. of a 5 per cent solution of cocaine is delivered. The solution is instilled a single drop at a time. Most patients will cough with the first few drops (as they will after pyriform sinus applications of 10 per cent cocaine). The patient is advised to refrain from coughing as long as possible after each application. In the average case, the last 0.5 cc. can be instilled without making the patient cough. In a sensitive patient, it is wise to hold the cannula in place for several seconds after an instillation, in order to fortify the patient's conscious control of the cough reflex.

### Conclusion

The aim of this procedure is to obtain efficient anesthesia with a minimum of drug base, and consequently with a maximum of safety. A prolonged period of application is essential to slow absorption. In brief, to produce efficient, yet safe, anesthesia we must get the most anesthesia available out of each drop of solution.

The Mayer Committee<sup>(3)</sup> recommended 0.1 Gm. (1.5 grains) of cocaine base as a safe dose. Our average dose is 0.16 Gm. (2.34 grains). For the pyriform application technique<sup>(2)</sup> (which employs 5 cc. of 10 per cent cocaine as a maximum) we used 0.56 Gm. (8.35 grains). We know that the average amount used in the country as a whole is much larger.

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### New Medical Film Productions

Three new films in the medical field are announced by Sturgis-Grant Productions, Inc., 314 East 46th Street, New York 17, N. Y., producers of medical films and filmstrips. All three are 16 mm., color and sound.

"The Male Sex Hormone," second of a series on endocrinology which this company has produced for Schering Corporation, Bloomfield, N. J., presents the physiology and the clinical aspects concerned with hormone interaction in the male. Running time is twenty-four minutes. Like its predecessor, "The Physiology of Normal Menstruation," the film will be available to medical schools and colleges throughout the country. Application should be made to: Medical Service Department, Schering Corporation, 2 Broad Street, Bloomfield, N. J.

"The Bone Bank" shows how a bank for the preservation of bone by refrigeration is organized, how such bone is used, and the advantages of this procedure. Philip D. Wilson, M.D., Surgeon-in-Chief, the Hospital for Special Surgery, New York City, directed the production of this film, which is intended for orthopedic surgeons and hospitals.

"From One Cell" is a biology film for high school and college students. In simple terms it explains the normal process of cell division and human development and its relation to cancer growth. The aim of the film is to clarify the biological processes involved and to interest students in cancer research. The American Cancer Society, sponsor of the film, is distributing prints to educational institutions throughout the country by means of its sixty-one local chapters. Running time is thirteen minutes.



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MARCH, 1951

### MALIK VS. MALIK

The name Malik in connection with the United Nations at once calls to mind the Russian, Jacob Malik. There is, however, another U.N. delegate with the same surname, but who differs as much in his ideology from Jacob Malik as black does from white. He is Charles Habib Malik from Lebanon, a Christian Arab who was formerly professor of philosophy at the American University in Beirut. *Time* for January 29 publishes excerpts from a recent address of his, first published in the *Christian Century*, in which he makes a remarkably clear-cut distinction between Communism and Christianity. "Communism," he points out, "is not only a total doctrine . . . at variance with the deepest persuasions of the West; it is . . . a total state . . . absolutely determined to spread its outlook, its system, its power, throughout the world . . . by force and subversion and every conceivable subtlety.

"Communists usually offer only one aspect of their teachings to a group or an individual

. . . These various aspects of Communism are offered as a bait, cunningly prepared to suit the victim."

Charles Malik believes that the only way to secure lasting peace is "to create those stubborn and irreducible facts which will force Communism *to change itself* and to live at peace with the rest of the world." He then enumerates four orders of such facts which must be created: the balance of power, the balance of justice, the balance of mind, and the balance of spirit.

The most important task in securing the balance of power in the Far East, he believes, is the independence of China. In Europe it was necessary not only to achieve military balance of power, but also to create in the European spirit "an absolute faith in its values and a determined will to fight for them."

In discussing the balance of justice, he says: "There are appalling conditions of privation and poverty throughout Asia and many other portions of the world. So long as Moscow means, truly or falsely, hope for the masses, and the Western world does not mean so with the same clarity, it is idle to speak of . . . live-and-let-live.

"The balance of mind," he continues, "requires that there be some equality in the accessibility to truth and information between the countries of the Iron Curtain and the rest of the world . . . There can be no peace until . . . there is equal intellectual and social intercourse between the Communist and the non-Communist worlds . . ."

The balance of spirit is, Mr. Malik thinks, the most important task of all. His address closes with a ringing challenge to the non-Communist nations, especially the Western nations, to elevate their ideals of living:

"The Western world . . . trusts far more in gadgets and in the manipulation of the emotions than in the truth and potency of ideas. . . . The ideal of taking a college degree, getting married and settled, rearing a family, having a dependable job, making lots of money and having a solid and ever expanding bank account—this ideal conceived purely in these terms is not good enough. It is . . . a very timid ideal . . . Confronted with this ideal alone, Asia—if I must be frank with you—is not impressed. In fact, despite all her darkness and misery, Asia can still do better. An Asian who knows something of the West's highest values . . . can turn to the West and say, 'You can do better also.'"

## GORGAS AND MAGNUSON

One of the most fascinating biographies recently published is that of General William C. Gorgas, entitled *Physician to the World*. The book should appeal particularly to North Carolinians, since its author, Mr. John M. Gibson, was born in Scotland County of this state. It should be of interest to all medical men just now, because the recent ousting of Dr. Paul Magnuson as medical director of the Veterans Administration by General Carl Gray, Jr., recalls the unhappy experience of Dr. Gorgas as chief sanitary officer of Panama, as told so vividly by Mr. Gibson.

After Gorgas had succeeded in ridding Havana of yellow fever by eradicating the *Stegomyia* mosquito—later named *Aedes aegypti*—he was commissioned to rid Panama of the same disease and so make possible the construction of the Panama Canal. Here he had to work under the domination of the Canal Commission, composed of seven non-medical men—a retired rear admiral, a retired major general, and five civil engineers. Although an Army medical board headed by Dr. Walter Reed, working with Dr. Carlos Finlay and Dr. Gorgas, had proved conclusively that yellow fever was transmitted by one species of mosquito, the bureaucrats on the Canal Commission refused to believe it, and would not allow the men or the money for screening buildings, installing sewer systems or taking other measures that had been so effective in Havana. One official spoke for them all when he said, "It's silly to spend all that money just to kill a few mosquitoes."

Literally thousands of lives were sacrificed to the stupidity and stubbornness of the medically ignorant lay members of the commission, to the interminable red tape of bureaucracy, and to the fear on the part of local politicians that enforcing regulations for the control of mosquitoes might cost votes in the next election.

Fortunately for the country, the American Medical Association came to the rescue by sending the chairman of its legislative committee, Dr. Charles A. L. Reed, to Panama for a first-hand investigation. Dr. Reed's report, submitted to the American Medical Association and to Secretary of War William H. Taft, was a terrific indictment of the stupidity, arrogance, and indifference to human life which had been manifested by the members of the Commission. Salient features of the report were published in newspapers all

over the country. Soon afterwards Dr. William H. Welch and Dr. Alexander Lambert got the ear of President Theodore Roosevelt, and the resignations of the seven members of the Canal Commission were asked for and received.

It is difficult for laymen to understand why doctors do not want to work under non-medical men. The experiences of Dr. Gorgas and, more recently, of Dr. Magnuson should help explain this reluctance.

1. Reed, C. A. L.: *Isthmian Sanitation*, J.A.M.A. 44:812-818 (March 11) 1905.

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## A BRITISH APPRAISAL OF THE NATIONAL HEALTH SERVICE

In the first year of the British National Health Service the *British Medical Journal*—the official organ of the British Medical Association—was accused of being too favorable to the Service. There was an understandable disposition to give the Minister of Health a chance to make the thing work, if possible, and to make the best of what was admittedly a bad bargain. Now, however, after two and a half years of the National Health Service, the editor of the *Journal* is completely disillusioned, and apparently has given up hope of making the scheme succeed. In the *British Medical Journal* for December 2, 1950, the leading editorial, entitled "A Failing Policy," is worthy of quoting at some length.

"The people of this country must face the fact that the National Health Service is heading for bankruptcy . . .

"We cannot escape the conclusion that the failure of the Minister of Health to provide a fully comprehensive health service, and to fulfill his obligations to the medical profession, lies in the economic mess that has come from appearing to promise the people of this country something for nothing. It is difficult to see how the National Health Service can be put on a sound footing and the full resources of modern medicine be at the disposal of the public without considerable readjustment of its economy. The medical profession is discontented and disillusioned, not because of payment, or lack of it, for this or that, but because it sees postponed indefinitely the opportunities for improving the medical care of people . . .

"Just in what direction is the National Health Service leading? The outside observer, ignoring our capacity—which one day might be exhausted—for muddling through, would be justified in saying, 'For the bankruptcy court.' Not only are we facing bankruptcy because of the Utopian finances of the Welfare State. We are, as a profession, facing the bankruptcy of a policy, a policy based on the decisions of the Coalition Government during a war for survival and put into execution by a Minister of Health who could not resist the temptation to behave like a Fairy Godmother to an impoverished nation . . .



"... The general practitioner has been promised greater opportunities in the hospital life of the country: what has happened at Kingston is fitting comment on this. As to payment, a new deal was promised in the shape of the Spens Committee's recommendations, which advocated a spread of income adjusted to the current value of money, among certain proportions of general practitioners. Now, two and a half years after the appointed day of July 5, 1948, this adjustment is still the subject of miscalculation, postponement, and evasion by the Minister of Health . . .

"The Minister of Health faces the bankruptcy of a policy in the consultant as well as in the general medical services. And what must astound the historian of the future is the failure in what is termed a 'Health Service' to enlarge and encourage the Public Health Service, the members of which have perhaps had the hardest knock of all.

"... The honeymoon period of the Welfare State is over. The uneasy marriage between the medical profession and the State is now undergoing the strains of an unbalanced domestic economy . . . the public has run riot in the chemist's shop—at what a cost it is only just beginning to discover. The shocking waste of public money over the inessentials of medicine has left little over for what is more urgently needed . . ."

\* \* \*

#### DR. PAUL ALLISON YODER

Dr. Paul A. Yoder literally died in harness, on February 12, 1951. Although he had been forced by a previous illness to resign as superintendent of the Forsyth County Tuberculosis Sanatorium, he continued to serve in an advisory capacity, and to the very end gave too generously of his strength and professional skill in helping carry on the work of the institution. He was examining a patient when the final summons came, in the form of a cerebral accident which was mercifully quick and painless.

Dr. Yoder was born in Hickory, North Carolina, March 9, 1895; was graduated with the A.B. degree from Lenoir College in 1916; served in the first World War from October, 1917, to January, 1919; was graduated from the University of Pennsylvania School of Medicine in 1923, having taken his first two years in medicine at the University of North Carolina; was intern at Bryn Mawr Hospital 1923-1924; was staff physician at the North Carolina Sanatorium 1924-1929; and was superintendent and medical director of the Forsyth County Sanatorium from its beginning in November, 1929, until December, 1949. In 1941 he was made an assistant professor of clinical medicine at Bowman Gray School of Medicine of Wake Forest College.

Dr. Yoder was secretary of the Forsyth County Medical Society from 1934 to 1942, and president in 1947. He was a member of

the State Medical Society, the American Medical Association, the Southern Medical Association, the North Carolina Tuberculosis Association (which he served as president in 1938-1940) and the National Tuberculosis Association. In 1937 he became a Fellow of the American College of Physicians.

The list of Dr. Yoder's achievements attests to his professional ability, but does not begin to tell of Paul Yoder, the warm, lovable man that his friends and his patients knew him to be. Indeed, his patients were his friends, as were countless relatives of his patients. He worked far longer hours than were demanded by his job, and did many things beyond the call of duty. Patients were never mere cases to him, but human beings who were sick and who needed help; and he never considered his own comfort or convenience when he had an opportunity to render service.

In 1926 he married Miss Evelyn Dale, who was a nurse in training when he was an intern at Bryn Mawr. She was a real helpmeet in every sense of the word. Together they made the Forsyth County Sanatorium a haven of refuge.

As the *Winston-Salem Journal* said editorially on February 14: "Dr. Yoder will continue to live in the lives of the many former tuberculosis patients he has helped restore to health, and his influence will be felt in the thousands of other lives which have benefited indirectly from his work, his research, study and writings."

\* \* \*

#### DR. ROBERT R. GARVEY

On Thursday, February 22, Dr. Robert R. Garvey of Winston-Salem slipped away as quietly and unostentatiously as he had lived. He was a splendid example of the family doctor who became a specialist without ever forgetting what he had learned in general practice. His life was also a lesson in courage. During the past ten years he was badly crippled by arthritis, but even when suffering himself he never lost his cheerful smile or his sympathetic manner. He kept at work as long as he was able, and never burdened his friends or patients with complaints. He will be missed by all who came in contact with him.

## Committees and Organizations

### NORTH CAROLINA STATE BOARD OF MEDICAL EXAMINERS

#### MEDICAL PRACTICE ACT

##### Art. 1. Practice of Medicine.

§ 90-1. **North Carolina medical society incorporated.**—The association of regularly graduated physicians, calling themselves the state medical society, is hereby declared to be a body politic and corporate, to be known and distinguished by the name of The Medical Society of the State of North Carolina. (Rev., s. 4491; Code, s. 3121; 1858-9, c. 258, s. 1; C. S. 6605.)

§ 90-2. **Board of examiners.**—In order to properly regulate the practice of medicine and surgery, there shall be established a board of regularly graduated physicians, to be known by the title of The Board of Medical Examiners of the State of North Carolina, which shall consist of seven regularly graduated physicians. (Rev., s. 4492; Code, s. 3123; 1858-9, c. 258, ss. 3, 4; Ex. Sess. 1921, c. 44, s. 1; C. S. 6606.)

§ 90-3. **Medical society appoints board.**—The medical society shall have power to appoint the board of medical examiners. (Rev., s. 4493; Code, s. 3126; 1858-9, c. 258, s. 9; C. S. 6607.)

§ 90-4. **Board elects officers and fills vacancies.**—The board of medical examiners is authorized to elect all such officers and to frame all such by-laws as may be necessary, and in the event of any vacancy by death, resignation, or otherwise, of any member of said board, the board, or a quorum thereof, is empowered to fill such vacancy. (Rev., s. 4494; Code, s. 3128; 1858-9, c. 258, s. 11; C. S. 6608.)

§ 90-5. **Meetings of board.**—The board of medical examiners may assemble once in every year in the city of Raleigh, and shall remain in session from day to day until all applicants who may present themselves for examination within the first two days of this meeting have been examined and disposed of; other meetings in each year may be held at some suitable point in the state if deemed advisable. (Rev., s. 4495; 1915, c. 220, s. 1; 1935, c. 363; C. S. 6609.)

§ 90-6. **Regulations governing applicants for license, examinations, etc.**—The board of medical examiners is empowered to prescribe such regulations as it may deem proper, governing applicants for license, admission to examinations, the conduct of applicants during examinations, and the conduct of examinations proper. (1921, c. 47, s. 5; Ex. Sess. 1921, c. 44, s. 2; C. S. 6610.)

§ 90-7. **Bond of secretary.**—The secretary of the board of medical examiners shall give bond with good surety, to the president of the board, for the safe-keeping and proper payment of all moneys that may come into his hands. (Rev., s. 4497; Code, s. 3134; 1858-9, c. 258, s. 17; C. S. 6611.)

§ 90-8. **Officers may swear applicants and summon witnesses.**—The president and secretary of the board of medical examiners of this state shall have power to administer oaths to all persons who may apply for examination before the board, or to any other persons deemed necessary in connection with performing the duties of the board as imposed by law. The board shall have power to summon any witnesses deemed necessary to testify under oath in connection with any cause to be heard before it; or to summon any licensee against whom charges are preferred in writing, and the failure of the li-

centiate, against whom charges are preferred, to appear at the stated time and place to answer to the charges, after due notice or summons has been served in writing, shall be deemed a waiver of his right to said hearing, as provided in § 90-14. (1913, c. 20, s. 7; Ex. Sess. 1921, c. 44, s. 3; C. S. 6612.)

§ 90-9. **Examination for license; scope; conditions and prerequisites.**—It shall be the duty of the board of medical examiners to examine for license to practice medicine or surgery, or any of the branches thereof, every applicant who complies with the following provisions: He shall, before he is admitted to examination, satisfy the board that he has an academic education equal to the entrance requirements of the University of North Carolina, or furnish a certificate from the superintendent of public instruction of the county that he has passed an examination upon his literary attainments to meet the requirements of entrance in the regular course of the state university. He shall exhibit a diploma or furnish satisfactory proof of graduation from a medical college in good standing requiring an attendance of not less than four years, and supplying such facilities for clinical and scientific instruction as shall meet the approval of the board; but the requirement of four years attendance at a school shall not apply to those graduating prior to January the first, nineteen hundred.

The examination shall cover the following branches of medical science: anatomy, embryology, histology, physiology, pathology, bacteriology, surgery, pediatrics, medical hygiene, chemistry, pharmacy, materia medica, therapeutics, obstetrics, gynecology, and the practice of medicine.

If on such examination the applicant is found competent, the board shall grant him a license authorizing him to practice medicine or surgery or any of the branches thereof.

Five members of the board shall constitute a quorum, and four of those present shall be agreed as to the qualifications of the applicant. (Rev., s. 4498; 1913, c. 20, ss. 2, 3, 6; 1921, c. 47, s. 1; C. S. 6613.)

§ 90-10. **Two examinations, preliminary and final, allowed.**—It shall be the duty of the state board of medical examiners to examine any applicant for license to practice medicine on the subjects of anatomy, histology, physiology, bacteriology, embryology, pathology, medical hygiene, and chemistry, upon his furnishing satisfactory evidence from a medical school in good standing, and supplying such facilities for anatomical and laboratory instruction as shall meet with the approval of the board, that he has completed the course of study in the school upon the subjects mentioned. The board shall set to the credit of such applicant upon its record books the grade made by him upon the examination, which shall stand to the credit of such applicant; and when he has subsequently completed the full course in medicine and presents a diploma of graduation from a medical college in good standing, requiring a four years course of study of medicine for graduation, and when he has completed the examination upon the further branches of medicine, to wit, pharmacy, materia medica, therapeutics, obstetrics, gynecology, pediatrics, practice of medicine and surgery, he shall have accounted to his credit the grade made upon the former examination, and if then upon such completed examination he be found competent, said board shall grant him a license to practice medicine and surgery, and any of the branches thereof. (1921, c. 47, s. 2; Ex. Sess. 1921, c. 44, s. 4; C. S. 6614.)

§ 90-11. **Qualification of applicant for license.**—Every person making application for a license to practice medicine or surgery in the state shall be not less than twenty-one years of age, and of good moral character, before any license can be granted by the board of medical examiners: Provided, that



the age requirement shall not apply to students taking the examinations of the first two years in medicine. (1921, c. 47, s. 3; Ex. Sess. 1921, c. 44, s. 5; C. S. 6615.)

**§ 90-12. Limited license.**—The board may, whenever in its opinion the conditions of the locality where the applicant resides are such as to render it advisable, make such modifications of the requirements of the preceding sections, both as to application for examination and examination for license, as in its judgment the interests of the people living in that locality may demand, and may issue to such applicant a special license, to be entitled a "Limited License", authorizing the holder thereof to practice medicine and surgery within the limits only of the districts specifically described therein. The holder of the limited license practicing medicine or surgery beyond the boundaries of the district as laid down in said license shall be guilty of a misdemeanor, and upon conviction shall be fined not less than twenty-five dollars nor more than fifty dollars for each and every offense; and the board is empowered to revoke such limited license, in its discretion, after due notice. The clerk of the superior court, in registering the holder of a limited license, shall copy upon the certificate of registration and upon his record the description of the district given in the license. (1909, c. 218, s. 1; C. S. 6616.)

**§ 90-13. When license without examination allowed.**—The board of medical examiners shall in their discretion issue a license to any applicant to practice medicine and surgery in this state without examination if said applicant exhibits a diploma or satisfactory proof of graduation from a medical college in good standing, requiring an attendance of not less than four years and a license issued to him to practice medicine and surgery by the board of medical examiners of another state. (1907, c. 890; 1913, c. 20, s. 3; C. S. 6617.)

**§ 90-14. Board may rescind license.**—The board shall have the power to revoke and rescind any license granted by it, when, after due notice and hearing, it shall find that any physician licensed by it has been guilty of grossly immoral conduct, or of producing or attempting to produce a criminal abortion, or, by false and fraudulent representations, has obtained or attempted to obtain, practice in his profession, or is habitually addicted to the use of morphine, cocaine or other narcotic drugs, or has by false or fraudulent representations of his professional skill obtained, or attempted to obtain, money or anything of value, or has advertised or held himself out under a name other than his own, or has advertised or publicly professed to treat human ailments under a system or school of treatment or practice other than that for which he holds a license, or is guilty of any fraud or deceit by which he was admitted to practice, or has been guilty of any unprofessional or dishonorable conduct unworthy of, and affecting, the practice of his profession, or has been convicted in any court, state or federal, of any felony or other criminal offense involving moral turpitude. Upon the hearing before said board of any charge involving a conviction of such felony or other criminal offense, a transcript of the record thereof certified by the clerk of the court in which such conviction is had, shall be sufficient evidence to justify the revocation or rescinding of such license. The findings and action of said board shall, in all such cases and hearings, be final and conclusive. And, for any of the above reasons, the said board of medical examiners may refuse to issue a license to an applicant. The said board of medical examiners may, in its discretion, restore a license so revoked and rescinded, upon due notice being given and hearing had, and satisfactory evidence produced of reformation of the

licentiate. (1921, c. 47, s. 4; Ex. Sess. 1921, c. 44, s. 6; 1933, c. 32; C. S. 6618.)

**§ 90-15. License fee; salaries, fees, and expenses of board.**—Each applicant for examinations shall pay to the treasurer of the board of medical examiners of the state of North Carolina a fee of fifteen dollars (\$15) before being admitted to the examination: Provided, however, that in the case of applicants taking the examinations in two halves, as provided in § 90-10, the fee shall be seven and one-half dollars (\$7.50) for each of the two half examinations. Whenever any license is granted without examination, as authorized in § 90-13, the applicant shall pay to the treasurer of the board a fee of fifty dollars (\$50). Whenever a limited license is granted, as provided in § 90-12, the person shall pay to the treasurer of the board a fee of fifteen dollars (\$15). A fee of five dollars (\$5) shall be paid for each duplicate license. All fees shall be paid in advance to the treasurer of the board of medical examiners of the state of North Carolina, to be by him held as a fund for the use of said board. The compensation and expenses of the members and officers of said board, and all expenses proper and necessary in the opinion of said board, to the discharge of its duties under and to enforce the laws regulating the practice of medicine or surgery shall be paid out of such funds, upon the warrant of the president and secretary of said board. The salaries and fees of the officers and members of the said board shall be fixed by the board, but shall not exceed ten dollars (\$10) per day per member, and railroad fare and hotel expenses; and no expense shall be created to exceed the income from fees herein provided. Any unexpended sum or sums of money remaining in the treasury of the said board at the expiration of the terms of office of the members thereof, shall be paid over to their successors after their election and qualification as such. (Rev., s. 4501; Code, s. 3130; 1858-9, c. 258, s. 13; 1913, c. 20, ss. 4, 5; 1921, c. 47, s. 5; Ex. Sess. 1921, c. 44, s. 7; C. S. 6619.)

**§ 90-16. Board to keep record; publication of names of licentiates; transcript as evidence.**—The board of examiners shall keep a regular record of its proceedings in a book kept for that purpose, together with the names of the members of the board present, the names of the applicants for license, and other information as to its actions. The board of examiners shall cause to be entered in a separate book the name of each applicant to whom a license is issued to practice medicine or surgery, along with any information pertinent to such issuance. The board of examiners shall publish the names of those licensed in three daily newspapers published in the state of North Carolina, within thirty days after granting the same. A transcript of any such entry in the record books, or a certificate that there is not entered therein the name and proficiency or date of granting such license of a person charged with the violation of the provisions of this article, certified under the hand of the secretary and the seals of the board of medical examiners of the state of North Carolina, shall be admitted as evidence in any court of this state when it is otherwise competent. (Rev., s. 4500; Code, s. 3129; 1858-9, c. 258, s. 12; 1921, c. 47, s. 6; C. S. 6620.)

**§ 90-17. Blanks furnished clerk.**—It shall be the duty of the medical society of the state of North Carolina to prescribe proper form of certificates required by this article and all such blanks and forms as the clerk may need to enable him to perform his duties under this article. (Rev., s. 4505; 1889, c. 181, s. 7; 1899, c. 93, s. 4; C. S. 6621.)

**§ 90-18. Practicing without license; practicing defined; penalties.**—No person shall practice medicine or surgery, or any of the branches thereof, nor in any case prescribe for the cure of diseases unless he shall have been first licensed and registered so to do in the manner provided in this article, and if



any person shall practice medicine or surgery without being duly licensed and registered, as provided in this article, he shall not be allowed to maintain any action to collect any fee for such services. The person so practicing without license shall be guilty of a misdemeanor, and upon conviction thereof shall be fined not less than fifty dollars (\$50) nor more than one hundred (\$100), or imprisoned at the discretion of the court for each and every offense.

Any person shall be regarded as practicing medicine or surgery within the meaning of this article who shall diagnose or attempt to diagnose, treat or attempt to treat, operate or attempt to operate on, or prescribe for or administer to, or profess to treat any human ailment, physical or mental, or any physical injury to or deformity of another person: Provided, that the following cases shall not come within the definition above recited:

1. The administration of domestic or family remedies in cases of emergency.

2. The practice of dentistry by any legally licensed dentist engaged in the practice of dentistry and dental surgery.

3. The practice of pharmacy by any legally licensed pharmacist engaged in the practice of pharmacy.

4. The practice of medicine and surgery by any surgeon or physician of the United States army, navy, or public health service in the discharge of his official duties.

5. The treatment of the sick or suffering by mental or spiritual means without the use of any drugs or other material means.

6. The practice of optometry by any legally licensed optometrist engaged in the practice of optometry.

7. The practice of midwifery by any woman who pursues the vocation of midwife.

8. The practice of chiropody by any legally licensed chiropodist when engaged in the practice of chiropody, and without the use of any drug.

9. The practice of osteopathy by any legally licensed osteopath when engaged in the practice of osteopathy as defined by law, and especially § 90-129.

10. The practice of chiropractic by any legally licensed chiropractor when engaged in the manual adjustment of the twenty-four spinal vertebrae of the human body and without the use of drugs.

11. The practice of medicine or surgery by any reputable physician or surgeon in a neighboring state coming into this state for consultation with a resident registered physician. This proviso shall not apply to physicians resident in a neighboring state and regularly practicing in this state.

12. Physicians who have a diploma from a regular medical college or were practicing medicine and surgery in this state prior to the seventh day of March, one thousand eight hundred and eighty-five, and who are properly registered as required by law.

13. Any person practicing Radiology as herein-after defined shall be deemed to be engaged in the practice of medicine within the meaning of this article. "Radiology" shall be defined as, that method of medical practice in which demonstration and examination of the normal and abnormal structures, parts or functions of the human body are made by use of x-rays. Any person shall be regarded as engaged in the practice of Radiology who makes or offers to make, for a consideration, a demonstration or examination of a human being or a part or parts of a human body by means of fluoroscopic exhibition or by the shadow imagery registered with photographic materials and the use of x-rays; or holds himself out to diagnose or able to make or makes any interpretation or explanation by word of mouth, writing or otherwise of the meaning of such fluoroscopic or registered shadow imagery of any part of

the human body by use of x-rays; or who treats any disease or condition of the human body by the application of x-rays or radium. Nothing in this subsection shall prevent the practice of Radiology by any person licensed under the provisions of Articles 2, 5, 6, and 11 of chapter 110. (Rev., ss. 3645, 4502; Code, s. 3122; 1858-9, c. 258, s. 2; 1885, c. 117, s. 2; 1885, c. 261; 1889, c. 181, ss. 1, 2; 1921, c. 47, s. 7; Ex. Sess. 1921, c. 44, s. 8; 1941, c. 163; C. S. 6622.)

§ 90-19. Practicing without registration; penalties.—Any person desiring to engage in the practice of medicine or surgery shall personally appear before the clerk of the superior court of the county in which he resides or practices, for registration as a physician or surgeon. The person so applying shall produce and exhibit before the clerk of the superior court a license obtained from the board of medical examiners of the state. The clerk shall thereupon register the date of registration, with the name and residence of such applicant, in a book to be kept for this purpose in his office marked "Register of Physicians and Surgeons," and shall issue to him a certificate of registration under the seal of the superior court of the county upon the form furnished him by the medical society of North Carolina, for which the clerk shall be entitled to collect from said applicant a fee of twenty-five cents. The person obtaining such certificate shall be entitled to practice medicine or surgery, or both, in the county where the same was obtained, and in any other county in this state; but if he shall remove his residence to another county he shall exhibit said certificate to the clerk of such other county and be registered, which registration shall be made by said clerk without fee or charge.

Any person who practices or attempts to practice medicine or surgery in this state without first having registered and obtained the certificate required in this section, shall be guilty of a misdemeanor, and upon conviction thereof shall be fined not less than twenty-five dollars nor more than one hundred dollars, or be imprisoned at the discretion of the court, for each and every offense: Provided, this section shall not apply to women pursuing the vocation of midwife, nor to reputable physicians or surgeons resident in a neighboring state coming into this state for consultation with a registered physician of this state. (Rev., ss. 3646, 4504; 1889, c. 181, ss. 4, 5; 1891, c. 420; Ex. Sess. 1921, c. 44, s. 9; C. S. 6623.)

§ 90-20. Clerk punishable for illegally registering physician.—If any clerk of the superior court shall register, or issue a certificate to, any person practicing medicine or surgery in any other manner than that prescribed by law, he shall be guilty of a misdemeanor, and upon conviction thereof shall be fined not less than two hundred dollars and shall be removed from office. (Rev., s. 3647; 1889, c. 181, s. 6; C. S. 6624.)

§ 90-21. Certain offenses prosecuted in superior court; duties of attorney-general.—In case of the violation of the criminal provisions of §§ 90-18 to 90-20, the attorney-general of the state of North Carolina, upon complaint of the board of medical examiners of the state of North Carolina, shall investigate the charges preferred, and if in his judgment the law has been violated, he shall direct the solicitor of the district in which the offense was committed to institute a criminal action against the offending persons. A solicitor's fee of five dollars shall be allowed and collected in accordance with the provisions of § 6-12. The board of medical examiners may also employ, at their own expense, special counsel to assist the attorney-general or the solicitor.

Exclusive original jurisdiction of all criminal actions instituted for the violations of §§ 90-18 to



90-20 shall be in the superior court, the provisions of any special or local act to the contrary notwithstanding. (1915, c. 220, s. 2; C. S. 6625.)

## BULLETIN BOARD

### PRELIMINARY PROGRAM of the NINETY-SEVENTH ANNUAL SESSION

The Medical Society  
of the  
State of North Carolina  
May 7, 8, and 9, 1951  
PINEHURST, NORTH CAROLINA

Headquarters—Hotel Carolina

### RESUME OF PROGRAM

#### SUNDAY, MAY 6, 1951

- 11:00 A.M.—Executive Committee Meeting (Small Card Room)  
6:30 P.M.—Memorial Service  
Sermon: C. Sylvester Green, Executive Vice President, Medical Foundation of North Carolina, Chapel Hill  
Music: Music Department, Flora McDonald College, Directed by Dean Robert Smith, Red Springs

#### MONDAY, MAY 7, 1951

- 9:00 A.M.—Registration Booth opens (Front Lobby)  
9:00 A.M.—Exhibits Open (West Porches)  
2:00 P.M.—House of Delegates of Medical Society (Ballroom)  
5:30 P.M.—Intermission, House of Delegates of Medical Society  
6:00 P.M.—Medical College of Virginia Alumni Dinner (Crystal Room)  
6:00 P.M.—Exhibits Close  
8:00 P.M.—House of Delegates Reconvenes (Ballroom)  
8:30 P.M.—Medical Auxiliary Program (To be announced)

#### TUESDAY, MAY 8, 1951

- 7:00 A.M.—Medical Officers Breakfast (Crystal Room)  
8:00 A.M.—Registration Booth Opens (Front Lobby)  
8:45 A.M.—Exhibits Open (West Porches)  
9:00 A.M.—First General Session of Medical Society (Ballroom)  
9:00 A.M.—Executive Board Meeting, Auxiliary to Medical Society (Pine Room)  
10:00 A.M.—Annual Meeting, Auxiliary to Medical Society (Pine Room)  
10:00 A.M.—Medical Advisory Committee to the N. C. Commission for the Blind (Dutch Room)  
1:00 P.M.—Luncheon, Auxiliary to Medical Society (Country Club)  
1:00 P.M.—Medical Alumni Luncheons (Schedule and places to be announced in official program)  
2:30 P.M.—Section Meetings, Medical Society:  
Section on General Practice of Medicine and Surgery (Pine Room)  
Section on Pediatrics  
Section on Gynecology and Obstetrics  
Conjoint Program (Ballroom)  
Section on Ophthalmology and Otolaryngology (Theatre)  
Section on Public Health and Education (Large Card Room)  
7:00 P.M.—President's Dinner (Main Dining Room)

#### WEDNESDAY, MAY 9, 1951

- 8:00 A.M.—Registration Booth Opens (Front Lobby)  
9:00 A.M.—Second General Session of Medical Society (Ballroom)  
10:00 A.M.—Bridge and Canasta Party, Auxiliary to Medical Society (Large Card Room)  
10:50 A.M.—Elections  
11:50 A.M.—Award of Golf Prizes  
12:00 Noon—Recess for Conjoint Session (Ballroom)  
12:20 P.M.—Reconvene—Award Exhibit Attendance Prizes (Ballroom)  
12:35 P.M.—Presentation High School Essay Contest Winner  
1:00 P.M.—Medical Alumni Luncheons (Schedule and places to be announced in official program)  
2:30 P.M.—Second meeting of House of Delegates (Small Card Room)  
2:30 P.M.—Section Meetings, Medical Society  
Section on Surgery (Large Card Room)

Section on Practice of Medicine (Ballroom)  
Section on Neurology and Psychiatry (Pine Room)  
Section on Radiology (Theatre)  
Section on Pathology (Dutch Room)  
5:00 P.M.—Third General Session (Ballroom)  
Adjournment, *sine die*

### PROGRAM OF THE MEDICAL SOCIETY

#### OFFICERS' BREAKFAST

TUESDAY, MAY 8, 1951—7:00 A.M.  
(Crystal Room)

- 8:00 A.M.—The Legislative and Military Influence on Medicine at the National Level — Frank E. Wilson, M.D., American Medical Association Washington Office, Washington, D. C.  
8:20 A.M.—Maryland's Medical Program for the Indigent—Maurice C. Pincoff, M.D., Professor of Medicine, University School of Medicine, Baltimore  
8:40 A.M.—The Role of Medicine in Rural Health —Mr. Aubrey D. Gates, Field Director, Rural Health Committee, American Medical Association, University of Arkansas Extension Service, Little Rock  
9:00 A.M.—Adjournment

#### FIRST GENERAL SESSION TUESDAY, MAY 8

- 9:00 A.M.—Call to Order, Millard D. Hill, M.D., Chairman Committee on Arrangements  
Invocation  
Announcements  
Presentation of President Roscoe Drake McMillan, M.D.  
9:10 A.M.—Report of Committee on Moore County Medal:  
Rowland T. Bellows, M.D., Chairman, Charlotte  
William S. Doshier, M.D., Wilmington  
Isaac H. Manning, Jr., M.D., Durham  
9:20 A.M.—(From Section on Ophthalmology and Otolaryngology)  
J. E. Prefontaine, M.D., Chairman  
Eye Signs in Intracranial Diseases—Alfred N. Costner, M.D., Durham  
9:40 A.M.—(From Section on General Practice of Medicine and Surgery)  
Wayne J. Benton, M.D., Chairman  
(Subject and speaker to be designated)  
10:00 A.M.—(From Section on Pediatrics)  
Charles F. Williams, M.D., Chairman  
Some Problems of Premature Infants —Harry H. Gordon, M.D., Professor of Pediatrics, University of Colorado Medical School, Denver  
10:20 A.M.—Address (Subject to be designated)  
Elmer L. Henderson, M.D., President American Medical Association, Louisville  
11:00 A.M.—(From Section on Gynecology and Obstetrics)  
Robert J. Ruark, M.D., Chairman  
A Simplified Modification for Staining the Vaginal Smear for Immediate Appraisal of Endocrine Activity—John P. U. McLeod, M.D., Marshville  
11:20 A.M.—(From Section on Public Health and Education)  
R. Eugene Fox, M.D., Chairman  
The Progress of Medical Civil Defense in North Carolina—Walton W. Kitchin, M.D., Clinton

- 11:40 A.M.—Address (Subject to be designated)  
Norvin C. Kiefer, M.D., Director  
National Security Resources Board,  
Washington, D. C.
- 12:10 P.M.—Presentation of Winner of High School  
Essay Contest
- 12:25 P.M.—A Medical Concept of Chronic Alcohol-  
ism—Robert Fleming, M.D., Peter  
Bent Brigham Hospital, Boston
- 12:55 P.M.—Adjournment

#### SECTION ON PRACTICE OF MEDICINE AND SURGERY

(Pine Room)

Tuesday, May 8—2:30 P.M.

- Wayne J. Benton, M.D., Chairman, Greensboro
- Ocular Problems of Interest to the General Prac-  
titioner  
Winston Roberts, M.D., Bowman Gray School  
of Medicine, Winston-Salem
- Management of Cardiac Edema  
Elias S. Faison, M.D., Charlotte
- Chest Pains—True or False  
Robert L. McMillan, M.D., Bowman Gray School  
of Medicine, Winston-Salem
- Black Widow Spider Syndrome  
L. J. Taubenhaus, M.D., Shallotte
- Iatrogenic Diseases  
W. M. Nicholson, M.D., Duke Hospital, Durham
- Complications of Poison Ivy (*Rhus toxicodendron*)  
Dermatitis  
G. W. Barefoot, M.D., Greensboro
- The Doctor and his Taxes  
Mr. Edwin Gill, U. S. Collector of Internal  
Revenue, Greensboro
- Incomplete—(Before General Session)

#### SECTION ON PEDIATRICS

Charles F. Williams, M.D., Chairman, Raleigh  
and

#### SECTION ON GYNECOLOGY AND OBSTETRICS

Robert J. Ruark, M.D., Chairman, Raleigh  
(Ballroom)

#### A CONJOINT PROGRAM

Tuesday, May 8—2:30 P.M.

- The Prophylactic Treatment of Prematurity  
F. B. Carter, M.D., R. A. Ross, M.D., and Violet  
Turner, M.D., Duke Hospital, Durham
- The Management of Labor and Delivery in the In-  
terest of the Premature Infant  
Donald L. Whitener, M.D., Bowman Gray  
School of Medicine, Winston-Salem
- Anesthesia in Premature Labor  
Ben Ogle, M.D., Raleigh
- Hospital Management of Premature Infants  
Angus McBryde, M.D., Durham
- Evaluation of the North Carolina Premature Infant  
Care Program  
Robert Murphy, M.D.
- Some Problems of Premature Infants  
Harry H. Gordon, M.D., Professor of Pediatrics,  
University of Colorado Medical School, Denver  
(Before First General Session)

#### SECTION ON OPHTHALMOLOGY AND OTOLARYNGOLOGY

(Theatre)

Tuesday, May 8—2:30 P.M.

- J. Edouard Prefontaine, M.D., Chairman,  
Greensboro
- Use of Oral Vasoconstrictors in Rhinology  
John S. Gordon, M.D., Charlotte

- A Resume of the Organization and Functioning of  
the Asheville Eye Clinic  
William F. Powell, M.D., Asheville
- Diseases of the Larynx: A Photographic Study  
J. C. Peele, M.D., Kinston
- Allergic Manifestations in Otolaryngology  
J. F. McGowan, M.D., Asheville
- Diseases of the Eye Lashes: Clinical Discussion  
John D. Wilsey, M.D., Winston-Salem
- Physiologic Management of Internal and External  
Nasal Deformities  
Carl N. Patterson, M.D., Durham
- Eye Signs in Intracranial Diseases  
Alfred N. Costner, M.D., Durham  
(Before First General Session)

#### SECTION ON PUBLIC HEALTH AND EDUCATION

(Large Card Room)

Tuesday, May 8—2:30 P.M.

- Robert Eugene Fox, M.D., Chairman, Albemarle
- Symposium on Medical Civil Defense Program**  
The Progress of Medical Civil Defense in North  
Carolina  
W. Walton Kitchin, M.D., Chairman, Medical  
Society Committee on Emergency Medical Serv-  
ice, Clinton
- Organization of Health Services in Civilian Defense  
Chauncey L. Royster, M.D., Associate, Medical  
Society Committee on Emergency Medical  
Service, Raleigh
- Discussant: (To be designated)
- The Problems of Blood and Blood Derivatives in  
Emergency Medical Care  
George A. Watson, M.D., Associate, Medical  
Society Committee on Emergency Medical  
Service, Durham
- Discussant: (To be designated)
- Public Health Aspects of Civil Defense  
C. P. Stevick, M.D., State Epidemiologist, Divi-  
sion of Epidemiology, State Board of Health,  
Raleigh
- Discussant: (To be designated)
- General Discussion of Problem

#### PRESIDENT'S DINNER

(Main Dining Room)

Tuesday, May 8, 1951

- 7:00 P.M.—Banquet  
Toastmaster—Paul F. Whitaker, M.D.,  
Kinston
- Invocation  
Reverend Marshall Scott Woodson,  
President, Flora McDonald College,  
Red Springs
- 7:40 P.M.—Presentation of Guests
- 7:50 P.M.—Address: "Your Business and Mine"  
President Roscoe Drake McMillan,  
Red Springs
- 8:30 P.M.—Presentation of President's Jewel  
By James F. Robertson, M.D., Wil-  
mington
- 8:40 P.M.—Address: (Title to be designated)  
Howard A. Rusk, M.D., Professor and  
Chairman, Department of Physical  
Medicine and Rehabilitation, New  
York University — Bellevue Medical  
Center; Chairman, Health Resources  
Advisory Committee of the National  
Security Resources Board; and Chair-  
man, National Advisory Committee to  
Federal Selective Service System
- 9:20 P.M.—Adjournment
- 10:00 to  
2:00 P.M.—President's Ball



## SECOND GENERAL SESSION

(Ballroom)

WEDNESDAY, MAY 9, 1951

9:00 A.M.—(From Section on Practice of Medicine)

E. E. Menefee, Jr., M.D., Chairman  
 Myxedema: A Frequently Overlooked Controllable Condition — George T. Harrell, M.D., Bowman Gray School of Medicine, Winston-Salem  
 Discussion: Ernest H. Yount, M.D.

9:20 A.M.—(From Section on Neurology and Psychiatry)

R. Charman Carroll, M.D., Chairman, Asheville  
 Mabel E. Goudge, M.D., Vice-Chairman, Durham  
 A Doctor's Contribution to the Mental Hygiene of Civilians at War—Carl A. Whitaker, M.D., Associate Professor of Psychiatry, Emory University School of Medicine, Atlanta

9:40 A.M.—(From Section on Radiology)

Walter W. Vaughan, M.D., Chairman, Durham  
 Some Roentgen Aspects of Abnormal Pulmonary Function—Robert P. Borden, M.D., Assistant Professor of Radiology, Graduate School of Medicine, University of Pennsylvania, Philadelphia

10:00 A.M.—(From Section on Pathology)

Thomas N. Lide, M.D., Chairman, Winston-Salem  
 Neoplasms of Bone and Bones—R. P. Morehead, M.D., Bowman Gray School of Medicine, Winston-Salem

10:20 A.M.—Jaundice

Philip Thorek, M.D., Clinical Assistant Professor of Surgery, University of Illinois; Associate Professor of Surgery, Cook County Graduate School of Medicine; Attending Surgeon, Cook County Hospital, Chicago

11:00 A.M.—Address: Public Relations

Mr. Edgar J. Forio, Vice President, the Coca Cola Company, Atlanta

11:30 A.M.—(From Section on Surgery)

William B. McCutcheon, Chairman, Durham  
 (Subject and speaker to be designated)

11:50 A.M.—Election of members to expiring terms of boards

Recess of General Session

## CONJOINT SESSION

Wednesday, May 9, 1951—12:00 Noon

G. Grady Dixon, M.D., President of the State Board of Health, will preside over this meeting of the Medical Society of the State of North Carolina and the State Board of Health.

12:25 P.M.—Reconvening of Second General Session  
Award of Golf and Exhibit Prizes

12:40 P.M.—Adjournment

## SECTION ON SURGERY

(Large Card Room)

Wednesday, May 9, 1951—2:30 P.M.

William B. McCutcheon, Chairman, Durham  
 Cardiac Resuscitation—Further Observations and Review of Reported Cases

T. C. Bost, M.D., Charlotte

Discussion: John P. Kennedy, M.D., Charlotte

Enterogenous Cysts of the Cecum

F. M. Simmons Patterson, M.D., Laurinburg  
 Discussion: C. E. Gardner, Jr., M.D., Durham

Difficulty in Swallowing

Frank Johnston, M.D., Winston-Salem  
 Discussion: Julian A. Moore, M.D., Asheville

Ureterosigmoidostomy—Past and Present

H. Haynes Baird, M.D., and Hamilton W. McKay, M.D., Charlotte  
 Discussion: Jack Hughes, M.D., Charlotte

Diagnosis of Tumors of the Uterine Canal by Hysteroscope (Slides and Motion Pictures)

William B. Norment, M.D., Greensboro  
 Discussion: Roy McKnight, M.D., Charlotte

Chronic Thyroiditis

Joe M. Van Hoy, M.D., Charlotte  
 Discussion: Paul Kimmelstiel, M.D., Charlotte; Richard Taliaferro, M.D., Greensboro; William Shingleton, M.D., Durham

Treatment of Congenital Trachea-Esophageal Fistula

Will C. Sealey, M.D., Durham  
 Discussion: Paul Sanger, M.D., Charlotte

Influence of the Development of Vagotomy and of Banthine on the Surgical Treatment of Peptic Ulcer

Keith S. Grimson, M.D., and Benjamin H. Flowe, M.D., Durham

Discussion: W. B. McCutcheon, M.D., Durham; and R. D. Baxley, M.D., Siler City

SECTION ON NEUROLOGY AND PSYCHIATRY  
(Pine Room)

Wednesday, May 9—2:30 P.M.

R. Charman Carroll, M.D., Medical Director Highland Hospital, Chairman, Asheville

Mabel E. Goudge, M.D., Vice Chairman, Durham  
 Edward N. Pleasants, M.D., Superintendent of the State Hospital, Secretary, Raleigh

Program Committee:

R. Burke Suitt, M.D., Duke University School of Medicine, Chairman, Durham

Marion M. Estes, M.D., State Hospital, Raleigh  
 Convening of Section and report of the Nominating Committee

Designation of Committee on Moore County Award Election of Officers

Some Comparisons Concerning Neuropsychiatric Casualties of Recent American Wars

Colonel William E. Wilkinson, M.D., U.S. Army, Professor of Military Science and Tactics, Associate in Neuropsychiatry, Duke University School of Medicine, Durham

George Fraser Sutherland, M.D., Associate Professor of Neuropsychiatry, Duke University School of Medicine and Consultant in Neuropsychiatry, Veterans Administration Hospital, Roanoke, Virginia

Wilmer C. Betts, M.D., Captain, M.C., U.S. Army, Psychiatrist, 7th Infantry Division Korea

Lieutenant (j.g.) John S. Cook, Jr., M.D., M.C., U.S.N. (By invitation), U. S. Naval Hospital, Portsmouth, Virginia

Discussants: Leslie B. Hohman, M.D., Professor of Neuropsychiatry, Duke University School of Medicine, Durham; J. W. Roy Norton, M.D., Secretary-Treasurer and State Health Officer, State Board of Health, Raleigh

Bioelectric Correlates of Emotional States

Leonard J. Ravitz, Jr., M.D., Department of Neuropsychiatry, Duke University School of Medicine, Durham

Discussant: A. T. Miller, Ph.D., Professor of Physiology, the University of North Carolina School of Medicine, Chapel Hill

### The Use of Radioisotopes for the Localization of Brain Tumors

Frank Wrenn, M.D., Post-Doctoral Fellow of the Atomic Energy Commission, Division of Neurosurgery, Duke Hospital and Duke University School of Medicine, Durham  
Discussant: To be announced

### Follow-Up of Pre-Frontal Lobotomies Performed by the Duke Neurosurgical Staff

Leslie B. Hohman, M.D., Professor of Neuropsychiatry, Duke University School of Medicine, Durham  
Guy L. Odom, M.D., Associate Professor of Neurosurgery, Duke University School of Medicine, Durham  
R. Burke Suitt, M.D., Durham, and Chairman of The Lobotomy Committee, Veterans Administration Hospital at Roanoke, Virginia  
Discussant: Eben Alexander, Jr., M.D., Assistant Professor of Surgery, in charge of Neurosurgery, The Bowman Gray School of Medicine, Winston-Salem

### Modernization in Delusions

Clayton R. Estwistle, Jr., M.D., United States Public Health Service Fellow in Psychiatry, Duke University School of Medicine, and Assistant Resident in Neuropsychiatry, Duke Hospital, Durham  
Paul A. Walters, Jr., graduate student in Neuropsychiatry, Duke University School of Medicine, Durham—in conjunction with John P. Gillin, Ph.D., Professor of Anthropology and Research Professor in the Institute of Research in Social Science, the University of North Carolina, Chapel Hill  
R. Burke Suitt, M.D., Department of Neuropsychiatry and Duke University School of Medicine, Durham  
Discussant: Frederick R. Taylor, M.D., High Point, North Carolina; Professor of Medical History, Bowman Gray School of Medicine, Winston-Salem

### Carbon Dioxide Therapy

George A. Silver, M.D., Associate in Neuropsychiatry, Duke University School of Medicine, Durham  
Discussant: Frank G. Hall, Ph.D., Professor of Physiology and Chairman of the Department, Duke University School of Medicine, Durham

### Some Notes on Emotional Immaturity

Marshall L. Fisher, M.D., Director, The Mental Hygiene Clinic, Charlotte  
Discussant: To be announced

### Neuropsychiatric Aspects of Atomic Warfare in Relation to Child Welfare

H. Grant Taylor, M.D., Associate Professor of Pediatrics and Bacteriology and Assistant Dean, Duke University School of Medicine, Durham, Atomic Bomb Casualty Commission  
Discussant: To be announced

### Pitressin Treatment of Deteriorated Schizophrenics in the State Hospital at Butner

Lorant Forizs, M.D., Assistant Medical Superintendent of the State Hospital at Butner, North Carolina; formerly Assistant Professor of Neuropsychiatry at the University of Budapest  
Discussant: Robert W. Southerland, M.D., Charlotte

### The Doctor's Contribution to the Mental Hygiene of Civilians at War

Carl A. Whitaker, M.D., Associate Professor of Psychiatry, Emory University School of Medicine, Atlanta  
(Before the Second General Session, Wednesday, May 9)

## SECTION ON RADIOLOGY

(Theatre)

Wednesday, May 9, 1951—2:30 P.M.

- William W. Vaughan, M.D., Chairman, Durham  
2:30 P.M.—The Roentgen Aspect of Segmental Lung Anatomy  
George J. Baylin, M.D., Associate Professor of Radiology, Duke Hospital, Durham  
2:50 P.M.—Bronchogenic Carcinoma as a Medical Problem  
A. Derwin Cooper, M.D., Internist, Director of the Durham County Tuberculosis Sanatorium and the Watts Hospital Chest Clinic, Durham  
3:10 P.M.—A New Significance of Pulmonary Necrosis  
Frederick R. Gilmore, M.D., Associate Radiologist, Watts Hospital, Durham  
3:30 P.M.—The Surgical Management of Carcinoma of the Lung  
H. Max Schiebel, M.D., Chief of the Surgical Service, Watts Hospital, Durham  
Discussion of the four papers to be opened by guest speaker, Robert P. Barden, M.D., Assistant Professor of Radiology in the Graduate School of Medicine of the University of Pennsylvania; Radiologist to the Chestnut Hill Hospital in Philadelphia  
INTERMISSION  
4:20 P.M.—Some Roentgen Aspects of Abnormal Pulmonary Function  
Robert P. Barden, M.D., Assistant Professor of Radiology in the Graduate School of Medicine of the University of Pennsylvania; Radiologist to the Chestnut Hill Hospital in Philadelphia

## SECTION ON PATHOLOGY

(Dutch Room)

Wednesday, May 9, 1951—2:30 P.M.

Thomas N. Lide, Chairman, Winston-Salem

### Aspects of Bone Disease of General Interest

- Development and Growth of Bone—Normal and Abnormal  
Margaret Swanton, M.D., University of North Carolina, Chapel Hill  
Cystic Lesions of Bone with Particular Reference to Endocrine Dysfunction  
Elmer E. Pautler, Jr., M.D., Bowman Gray School of Medicine, Winston-Salem  
Myositis Ossificans of the Paravertebral Muscle  
J. U. Gunter, M.D., Durham  
Neoplasms of Bone and Bones  
R. P. Morehead, M.D., Bowman Gray School of Medicine, Winston-Salem  
(Before the General Session)

## THIRD GENERAL SESSION

(Ballroom)

Wednesday, May 9, 1951

- 5:00 P.M.—Report of the House of Delegates  
5:15 P.M.—Unfinished Business  
5:20 P.M.—New Business  
5:30 P.M.—Installation of President, President-Elect, and Vice-Presidents  
5:40 P.M.—Remarks by President and President-Elect  
5:50 P.M.—Adjournment sine die



## NEWS NOTES FROM THE UNIVERSITY OF NORTH CAROLINA

Postgraduate medical courses sponsored by the University School of Medicine and the Extension Division have been arranged at North Wilkesboro and Elkin, with the Wilkes-Alleghany Counties Medical Society and the Surry-Yadkin Counties Medical Society as co-sponsors, and at Shelby, with the Cleveland County Medical Society as co-sponsor. The programs are as follows:

### North Wilkesboro-Elkin

March 20—(North Wilkesboro)

4:00 p. m. Hematology

7:30 p. m. Liver and Gallbladder Diseases

—Dr. Louis A. M. Krause, University of Maryland School of Medicine

March 27—(Elkin)

4:00 p. m. Office Gynecology

7:30 p. m. Emergencies in Obstetric Practice

—Dr. John L. Parks, George Washington University School of Medicine

April 3—(North Wilkesboro)

4:00 p. m. Treatment of the Patient with Uncomplicated Diabetes in Office and Home

7:30 p. m. Complications of Diabetes: Their Prevention and Treatment

—Dr. Alexander Marble, Boston

April 10—(Elkin)

4:00 p. m. Allergy

7:30 p. m. The Psychosomatic Approach to Allergy

—Dr. Hal M. Davison, Atlanta

April 17—(North Wilkesboro)

4:00 p. m. Convulsive Disorders in Infants and Children

7:30 p. m. Highlights of Pediatric Practice

—Dr. Charles F. McKhann, Cleveland

April 24—(Elkin)

4:00 p. m. Vascular Disease

7:30 p. m. The Acute Abdomen

—Dr. S. F. Marshall, The Lahey Clinic

### Shelby

March 21—

4:00 p. m. Hematology

7:30 p. m. Common Gastrointestinal Complaints

—Dr. Louis A. M. Krause, University of Maryland School of Medicine

March 28—

4:00 p. m. Office Gynecology

7:30 p. m. Emergencies in Obstetric Practice

—Dr. John L. Parks, George Washington University School of Medicine

April 4—

4:00 p. m. Treatment of the Patient with Uncomplicated Diabetes in Office and Home

7:30 p. m. Complications of Diabetes: Their Prevention and Treatment

—Dr. Alexander Marble, Boston

April 11—

4:00 p. m. Allergy

7:30 p. m. The Psychosomatic Approach to Allergy

—Dr. Hal M. Davison, Atlanta

April 18—

4:00 p. m. Convulsive Disorders in Infants and Children

7:30 p. m. Highlights of Pediatric Practice  
—Dr. Charles F. McKhann, Cleveland

April 25—

4:00 p. m. Vascular Disease

7:30 p. m. The Acute Abdomen

—Dr. S. F. Marshall, The Lahey Clinic

## WINSTON-SALEM HEART SYMPOSIUM

The annual Winston-Salem Heart Symposium and Clinics will be held on April 12 and 13 under sponsorship of the Winston-Salem Heart Association. Dr. Robert L. McMillan, associate professor of clinical internal medicine, Bowman Gray School of Medicine, is in charge of arrangements for the meeting.

Participants will include: Dr. Stanley Gibson, director of the department of cardiology, Children's Memorial Hospital, Chicago, and professor of pediatrics and chairman of the department, Northwestern University School of Medicine; Dr. R. Bruce Logue, director of the division of cardiology and assistant professor of medicine, Emory University, Georgia; Dr. Louis N. Katz, Michael Reese Hospital and director of the cardiovascular department of the Medical Research Institute, Chicago; Dr. E. Sterling Nichol, director of the American Heart Association, Miami; Dr. A. Carlton Ernstene, director of the division of medicine, Cleveland Clinic, Cleveland; Dr. Irving S. Page, director of research in cardiovascular diseases, Cleveland Clinic, Cleveland; Dr. Edward Weiss, professor of clinical medicine, Temple University and National Committee for Mental Hygiene, Philadelphia.

All doctors in North Carolina and nearby states are invited to attend.

## NEWS NOTES FROM THE BOWMAN GRAY SCHOOL OF MEDICINE OF WAKE FOREST COLLEGE

Dr. Harold D. Green, professor of physiology and pharmacology, participated in a seminar sponsored by the department of pharmacology at the University of Pennsylvania on February 6. He discussed the merits and limitations of various flow-meter systems, with comments on applicability to specific problems.

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Dr. Ernest H. Yount, Jr., instructor in internal medicine, recently addressed the Davidson County Medical Society in Lexington on the subject of cortisone and ACTH.

\* \* \*

Dr. Frank R. Lock, member of the executive council of the South Atlantic Association of Obstetricians and Gynecologists, attended meetings of the organization held at Ormond Beach, Florida, on February 8, 9, and 10.

\* \* \*

Dr. Jerry K. Aikawa was elected to membership in the Southern Society of Clinical Research at the recent meeting held in New Orleans, Louisiana. Dr. Aikawa is research fellow in internal medicine.

\* \* \*

Dr. George T. Harrell, Jr., professor of internal medicine, spoke on "Medical Kidney Disease" at the meeting of the Rowan County Medical Society in Salisbury last month.

\* \* \*

Dr. C. C. Carpenter and Dr. H. M. Vann were elected to honorary membership in the North Carolina Gamma Chapter of Alpha Epsilon Delta at Wake Forest College recently. The organization is

a national honorary premedical society. Dr. Carpenter is medical school dean and professor of pathology, and Dr. Vann is registrar and professor of anatomy.

\* \* \*

Dr. David Cayer, associate professor of internal medicine, was one of the lecturers in the two-week course on radioisotopes in medicine given by the Oak Ridge Institute of Nuclear Studies at Oak Ridge, Tennessee, February 5 to 16.

### BRODIE C. NALLE LECTURE

The second Brodie C. Nalle Lecture, sponsored by The Nalle Clinic Foundation, will be presented at the Hotel Charlotte on Friday, April 27, 1951, at 8:00 p. m. The speaker will be Dr. Samuel A. Cosgrove of Jersey City, New Jersey.

Dr. Cosgrove has been Director of the Obstetrical Service of the Jersey City Medical Center for over thirty years, and for the past twenty years has been Medical Director of the Margaret Hague Maternity Hospital. He is a Fellow of the American Medical Association, of the American Gynecological Society, and of the American Association of Obstetricians, Gynecologists, and Abdominal Surgeons, also being a past president of this organization. He is also a Fellow and Governor of the American College of Surgeons, Diplomate of the American Board of Obstetrics and Gynecology, and Clinical Professor of Obstetrics, Faculty of Medicine, Columbia University.

Dr. Cosgrove's subject will be "The Clinical Management of Toxemia of Pregnancy." As he has a reputation of being an excellent teacher and lecturer, this presentation should be of great value to those physicians concerned with pre-natal care. All interested physicians are cordially invited to attend.

### NORTH CAROLINA ACADEMY OF GENERAL PRACTICE

The third annual session of the North Carolina Academy of General Practice was held in Durham, March 4-6, with a meeting of the board of directors preceding the first meeting of the assembly.

Participants on the program included Dr. Reece Berryhill, Dean of the University of North Carolina Medical School, who discussed the school's program in general practice; Dr. J. M. Ruffin of the Duke University Medical School, whose subject was "An Evaluation of Liver Function Tests Including Liver Biopsy"; Dr. J. L. Callaway, also of Duke, who discussed common skin diseases; Dr. Bingham Dai of Duke, "The Relationship Between Doctor and Patient"; Dr. Lesesne Smith of Spartanburg, South Carolina, "Childhood Accidents and the Physician's Responsibility" with discussion by Dr. Jay M. Arena of Durham; Dr. Eben Alexander, Bowman Gray School of Medicine, Winston-Salem, "Diagnosis and Treatment of Painful Neurological Syndromes"; Dr. O. C. Hansen-Pruss of Duke, "Some Practical Suggestions in the Treatment of Bronchial Asthma"; Dr. Samuel Martin of Duke, "Newer Antibiotics"; Dr. Charles E. Kunkle of Duke, "Care of the Hemiplegic and Newer Drugs in the Treatment of Parkinsonism"; and Dr. R. B. Robbins, Congress of Delegates, American Academy of General Practice and vice president of the American Medical Association, who was the banquet speaker.

The program also included a round of the wards and visits to the outpatient clinics at Duke and exhibits at the Washington Duke Hotel.

### JOHNSTON COUNTY MEDICAL SOCIETY

The Johnston County Medical Society has collected state, county, and A.M.A. dues from 100 per cent of its regular members for 1951. Of its six honorary members, only two have not paid their A.M.A. dues for the current year. All the dentists belonging to the society have paid their current dues.

### FORSYTH COUNTY MEDICAL SOCIETY

Dr. R. H. Kampmeier, director of the Department of Medicine, Vanderbilt University, was speaker at a dinner meeting of the Forsyth County Medical Society held on February 13. He discussed "The Modern Aspects of the Diagnosis and Treatment of Syphilis."

### DUKE UNIVERSITY ALUMNI LUNCHEON

The Duke Medical Alumni Luncheon during the meeting of the Medical Society of North Carolina will be held on Tuesday, May 8, at 1:00 p. m., at Mid Pines Club, Southern Pines. The fee is \$3.00 per plate, tax and gratuity included.

Please send tentative reservations to Talmage L. Peele, M.D., Box 3811, Duke Hospital, Durham, N. C., as soon as convenient.

### NEWS NOTES

Dr. H. L. Brockmann, High Point, has been appointed a member of the Council of the Southern Medical Association from North Carolina for a regular Council term of five years, beginning at the close of the annual meeting in Dallas, Texas, in November. The appointment was announced recently by the president-elect, Dr. R. J. Wilkinson of Huntington, West Virginia. Dr. Brockmann succeeds Dr. Lenox D. Baker, Durham, whose term will expire with the close of the Dallas meeting in November, and who having served the constitutional limit is not eligible for reappointment.

\* \* \*

Dr. Robert M. Stecher, F.A.C.P., Cleveland City Hospital, delivered a Nu Sigma Nu lecture at Duke Hospital on Thursday, March 15, on the subject of "Heredity in Rheumatic Diseases." Dr. Stecher, a former president of the American Rheumatism Association, has done original work on genetics and joint disease.

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Drs. L. C. Todd and A. D. Taylor of Charlotte have moved their offices from the Professional Building to the new Doctors' Building on Kings Drive.

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Drs. John O. Lafferty, James B. Hall, and O. D. Baxter of Charlotte have announced the association of Dr. Thomas O. Coppedge, Jr., and the removal of their office from 407 North Tryon Street to Doctors' Building, 1012 Kings Drive.

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Dr. Edward S. Bivens, Diplomate of the American Board of Radiology, has opened offices for the practice of radiology at Stanly County Hospital, Albemarle.

### TENNESSEE STATE MEDICAL ASSOCIATION

The annual meeting of the Tennessee State Medical Association will be held in Nashville, April 9, 10, and 11. Reservations are being made at the Maxwell House, where the sessions will take place.



## AMERICAN SOCIETY FOR THE STUDY OF FERTILITY

The seventh annual meeting of the American Society for the Preservation of Sterility will be held at the Ritz Carlton Hotel, Atlantic City, New Jersey, on June 9 and 10.

The Society offers an annual award of \$1,000, known as the Ortho Award, for an essay on the result of some clinical or laboratory research pertinent to the field of sterility. Competition is open to those who are in clinical practice as well as to individuals whose work is restricted to research in basic fields or full-time teaching positions. Full particulars concerning the competition for the 1951 award may be obtained by addressing the Secretary of the Society, 20 Magnolia Terrace, Springfield 3, Massachusetts.

## REPORT OF THE JOINT COMMITTEE ON CHEST X-RAY

A joint committee representing the American College of Radiology and the American College of Chest Physicians met in San Francisco, June 26, 1950, and prepared the following report. On December 4, 1950, the report was approved by the Board of Regents of the American College of Chest Physicians, meeting in Cleveland, Ohio, and on February 7, 1951, by the Board of Chancellors of the American College of Radiology, meeting in Chicago, Illinois.

It is hoped that this report of two organizations concerned with mass chest x-ray surveys and routine chest x-ray examinations in general hospitals will clarify any controversial problems regarding these procedures. It is also hoped that the broad principles upon which this report has been formulated may serve as a basis for solving any local situations which may arise concerning mass chest x-ray programs or routine chest x-ray in general hospitals.

### The Report

Committee of the American College of Radiology:  
Leo G. Rigler, M.D., Minneapolis, Minnesota,  
Chairman

Sydney J. Hawley, M.D., Seattle, Washington  
Russell H. Morgan, M.D., Baltimore, Maryland  
E. P. Pendergrass, M.D., Philadelphia, Pennsylvania

Paul C. Swenson, M.D., Philadelphia, Pennsylvania

Committee of the American College of Chest Physicians:

Otto L. Bettag, M.D., Chicago, Illinois, Chairman

Robert J. Anderson, M.D., Washington, D. C.  
Hollis E. Johnson, M.D., Nashville, Tennessee  
Edward Kupka, M.D., Berkeley, California  
James H. Stygal, M.D., Indianapolis, Indiana

### Purpose of Joint Committee on Chest X-ray

The purpose in having a Joint Committee on Chest X-ray is that two professional organizations, who have common interests, may exchange ideas and formulate unified thinking on the problems involved in routine chest x-rays in hospitals, (general, mental, etc.) and mass chest x-ray programs. In addition to this the Committee, after considerable discussion, agreed to another point, namely: that each physician should be encouraged to have a chest x-ray on all of his patients.

### Limits of Survey

For purposes of this discussion routine chest survey examinations should be defined as those examinations of the chest which are conducted on microfilm apparatus for screening normal persons from those patients with abnormal changes in the

chest. The examinations are screening and are not to be considered as diagnostic procedures. Screening method is for the purpose of detecting the presence or absence of a lesion but should not be utilized for identifying the nature of the pathological process.

The 14x17" film is fundamentally a diagnostic tool and its use, therefore, makes the examination more than a screening procedure. Survey chest x-rays, either in hospitals or in general population, are approved as a screening device if conducted by agencies which utilize well qualified professional technical staffs and which make a sincere effort to send the positive individuals to qualified local physicians or clinics for proper follow-up. The methods of conducting these were discussed at length. These included surveys by the U. S. Public Health Services, etc. Dr. Newell reported on the San Francisco County Medical Society's plan, whereby the medical society is responsible for the surveys but the project is financed through the local tuberculosis association.

### Interpretation and Report

Interpretation and reporting of medical findings is a medical matter and should bear the signature or identification of the responsible physician.

### Method of Reporting

Method of reporting of chest survey studies: This is a local matter and is by prearranged agreement between the employer and the employee in industrial surveys; in other surveys is in accord with medical ethics, according to local agreement.

### Type of Reporting

Type of reporting: The Committee discourages the reporting of suspicious cases as tuberculosis. It believes this to be a clinical diagnosis. The x-ray interpreter should designate the cases that require immediate follow-up as "urgent." The small film x-ray interpretation is merely an impression.

It should be emphasized that the 14x17" film is a diagnostic aid and the results derived therefrom are also impressions and not diagnoses. Even the larger film is but one of several examinations necessary in order to establish correct diagnosis.

### Professional Compensation

The professional cost of performing routine chest examinations in hospitals: The Joint Committee believes the radiologist and/or chest physician should be compensated just as any other physician practicing his profession. The procedure is time consuming and places a definite responsibility on the radiologist or chest physician. The Committee likewise felt that in this matter the basic principle of payment is by arrangement between the physician and the hospital or agency involved. In the reading of follow-up films there should also be an individual limit to the number of films which should be read in any one day by one physician and which he should not exceed. The compensation, of course, would have to take into consideration whether the physician not only reads the film but also makes the film.

### Clothing of Patients

Whether or not a screening examination can be conducted with the patient fully clothed: Since the number of lesions overlooked because of clothing (2 per cent) is considerably smaller than the normal variations of interpretation Chamberlin, etc., have demonstrated to exist in the reading of photofluorographic films, it was concluded that the examination of clothed persons was as effective a procedure as examination of the undressed persons. Since examination of the fully clothed persons is an easier procedure as compared with the examination of the undressed persons, the Committee agreed that screening examination can be conducted with the patient fully clothed.

### Readers' Qualifications

Qualifications of readers in mass chest surveys: It was believed at the present time there was no practical method which could be used to evaluate the qualifications of a particular reader. Studies in this respect are being made at the present time. It is hoped that within a short period of time satisfactory testing methods will be available. The Committee therefore agreed to leave this matter open for further discussion.

### Conclusion

The two Committees agreed that the bi-committee arrangement should continue and that another meeting be arranged in at least one year. In an effort to have the committees act continuously and without interruption, interim ideas should be sent to the respective chairmen and an exchange of opinions should continue during the meeting interval.

## AMERICAN HEART ASSOCIATION

### Penicillin and Hormones Give New Hope Against Rheumatic Fever

The use of penicillin in preventing rheumatic fever, and the experimental treatment of the disease with the hormones ACTH and cortisone, have been described as bringing "new hope for young hearts" in a leaflet entitled "What You Should Know about Rheumatic Fever," published by the American Heart Association and its affiliates. Next to accidents, rheumatic fever and rheumatic heart disease kill or disable more school-age children than any other cause. They also affect adults, having immobilized 40,000 service men in World War II.

Early treatment of certain streptococcal nose and throat infections, which precede rheumatic fever, has been found to reduce initial attacks of the disease and has proved effective in preventing recurrences, the Heart Association leaflet states. When rheumatic fever does occur, promising and dramatic results have been obtained in the treatment of early cases with the hormones ACTH and cortisone. As a result, the American Council on Rheumatic Fever of the American Heart Association recently inaugurated a cooperative study of the effectiveness of the hormones in treating the disease.

The cooperative study of ACTH and cortisone undertaken by the Council on Rheumatic Fever is being carried out as a long-term project at six research centers in the United States, one in Canada, and five in Great Britain. The study seeks to determine whether ACTH and cortisone actually alter the course of rheumatic fever, or merely suppress the symptoms, and whether these hormones prevent rheumatic heart disease.

Individual copies of these leaflets are available free of charge from your local affiliated heart association or from the American Heart Association, 1775, Broadway, New York 19, New York.

## LIFE INSURANCE MEDICAL RESEARCH FUND

Heart disease research will receive grants totaling more than \$725,000 this year from the life insurance companies of the United States and Canada, according to M. Albert Linton, President of the Life Insurance Medical Research Fund. The 1951 awards bring to nearly four million dollars the amount of money given to heart disease research by the life insurance companies since the Fund was organized in 1945. A grant of \$9,450 was awarded to Duke University School of Medicine for research by Dr. Philip Handler on humoral interrelationships in renal hypertension.

Since the first grants of the Fund were made at the start of 1946, the Fund has contributed a total of over \$3,940,000 in aid of research on the diseases

of the heart and blood vessels. In all, 166 research programs and 165 research fellowships have been supported.

## AMERICAN HEARING SOCIETY

"Hearing is Priceless—Protect It!" is the theme for National Hearing Week scheduled from May 6 through May 12 under the sponsorship of the American Hearing Society, 817 14th St., N. W., Washington, D. C., in cooperation with its 115 local chapters throughout the United States. Purpose of the annual, concentrated educational campaign is to call widespread attention to the fact this nation has a hearing problem directly affecting an estimated 15 million persons with some degree of hearing loss, including three million children.

## MICHAEL REESE HOSPITAL POSTGRADUATE SCHOOL

The Michael Reese Hospital Postgraduate School has announced the following courses during the spring of 1951: a one-week course in "Clinical Dermatology—Refresher Course in Diseases of the Skin for General Practitioners," April 2-7; a one-week course in "Surgery—Indications, Pre- and Post-Operative Care," April 9-14; a two-week course in "Recent Advances in Internal Medicine," April 30-May 12. For further information, address: Dr. Samuel Soskin, Dean, 29th Street and Ellis Avenue, Chicago 16, Illinois.

## WORLD MEDICAL ASSOCIATION

The Fifth General Assembly of The World Medical Association will be held in Stockholm, Sweden, September 15 to 20, 1951, and will be followed on September 21, by a meeting of the Medical Editors of the World.

About twenty members of the United States Committee attended the Third General Assembly in London, and a large number attended the Fourth General Assembly in New York City. The World Medical Association hopes that many will be able to attend the Fifth General Assembly.

It is understood that several members are planning a trip to Europe next summer, and it is suggested that they plan, if possible, to remain for The World Medical Association meeting. Other meetings at about the same time are:

1. International Foundation for Infantile Paralysis, Copenhagen, September 3-7, 1951.
2. World Confederation for Physical Therapy, Copenhagen, September 7-8, 1951.
3. International Society for the Welfare of Cripples, Stockholm, September 10-14, 1951.

## TENTH INTERNATIONAL CONGRESS OF DERMATOLOGY

### (Preliminary Notice)

The Tenth International Congress of Dermatology will be held in London during the summer of 1952, under the presidency of Sir Archibald Gray.

A preliminary program will be prepared during the current year.

As a result of the disruption produced by the last war, addresses of the secretaries of certain Dermatological Societies are not available, so that all those interested are asked to communicate with Gordon B. Mitchell-Heggs, M.D., General Secretary, at the Institute of Dermatology, St. John's Hospital for Diseases of the Skin, Lisle Street, Leicester Square, London, W.C. 2.



## DEPARTMENT OF THE ARMY

## Army Announces Early Successes With New Intramedullary Pin

An improved technique in the Army's treatment of femur fractures has been tried out for several weeks in Tokyo Army Hospital "with uniformly satisfactory results over this short period," according to Major General R. W. Bliss, Army Surgeon General.

The new intramedullary pin eliminates the need of a cast. When inserted through the end of a fractured femur into and along most of the length of the marrow cavity, the patient can bear weight on his leg almost immediately after fracture reduction. Present Army practice, however, requires him to rest for at least two weeks. By using crutches, the patient is then able to exercise and even do light work. When the fracture has healed, an incision is made at the upper end of the femur and the pin is then withdrawn.

The adoption of the intramedullary bone pin as standard throughout the Army Medical Service must await further investigation. The experience of five or six weeks is not enough to justify standardization of the item. However, if the pin should continue to show the same good results over a reasonable length of time, it will then be considered for use throughout the Army.

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## Medical Services Officers Who Desire Transfer to Another Service Must Apply Before July 9

Officers of the military medical services, Regular and Reserve, who wish to apply for transfer from one military service to another should submit requests at the earliest possible date, the Department of Defense has announced.

Authority for such transfers, provided by Public Law 779, Eighty-first Congress, expires July 9, 1951.

Officers of the Medical Corps, Dental Corps, Nurse Corps, Medical Service Corps, Veterinary Corps, and Women's Medical Specialist Corps are eligible to apply. Transfers will not be made except upon the individual officer's request and with the approval of both military departments concerned.

The law does not authorize transfer of retired officers. Commissioned warrant officers of the Navy's Hospital Corps also are excluded, since there is no counterpart for that grade in the Army or the Air Force.

Personnel transferred will be credited with Federal service already performed, for purposes of promotion, seniority and retirement, and unused leave may be transferred without loss.

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## Army Medics Cataloging Research Scientists

Taking a further step in better utilization of skilled manpower, the Army Surgeon General's Office is cataloging every applicant commissioned in the Medical Corps for the purpose of finding those who have training or experience in research.

The Army Surgeon General is interested in knowing just what medical talent is available for research in clinical and investigative work, including the fields of bacteriology, chemistry, and physiology.

The Medical Research and Development Board of the Army Surgeon General's Office has prepared a special questionnaire, which is given to selected individuals after they have reported to duty at the Medical Field Service School, Fort Sam Houston, Texas, where definite assignments are made.

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Army's Need for Women Specialists  
Double that of Two Months Ago

To meet the Army's anticipated expansion, the Army Medical Service hopes to recruit 572 volunteer women medical specialists by June 30, the Department of the Army has announced.

Brigadier General Paul I. Robinson, chief of the Surgeon General's personnel division, said that this is more than double the anticipated need announced last November.

The 572 volunteers needed by June 30 include 247 dietitians, 179 physical therapists, and 146 occupational therapists, Colonel Vogel said. She expressed confidence that these specialists could be obtained through the cooperation of the civilian professional societies with the Army Medical Service.

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Formation of liaison teams by the U. S. Army Medical Service and the Royal Canadian Army Medical Corps to further cooperation in standardizing military medical instruction and equipment of the two armies, was announced recently by the Department of the Army. This liaison is expected to save time and money for both countries through exchange of specific information in fields in which each is an acknowledged leader. For example, Canada will receive the benefit of American experience in the field of tropical medicine, while the United States will profit from Canadian research and development in arctic medicine, without costly duplicative efforts.

## FEDERAL SECURITY AGENCY

## Public Health Service

Surgeon General Leonard A. Scheele of the Public Health Service, Federal Security Agency, recently emphasized the dangers of drinking unpasteurized milk and called attention to some simple methods of heat-treating milk at home in the event community supplies of pasteurized milk are not available.

The Surgeon General pointed out that there are four approved home pasteurization methods which in the great majority of cases will provide adequate safeguards against milk-borne disease. Two of the methods—which may in some instances impart a cooked flavor to the milk—are recommended primarily for emergency situations in which community milk-processing plants may be put out of commission by fire, flood, or other disasters, including bombing attacks. The other two methods, which do not affect the flavor of the milk but take a little longer or require special equipment, are suggested for normal home use where pasteurized milk is not available.

"There are too many communities in the United States where raw milk is drunk regularly despite its recognized threat to health," Dr. Scheele said.

The emergency methods recommended by the Public Health Service are:

1. Pour water into the outer unit of a double boiler and bring to a vigorous boil. Pour milk into the inner unit and place within the outer unit. Cover and maintain same heat for ten minutes.

2. Bring milk quickly to a boil in an open saucepan while stirring constantly. Immediately place saucepan in cold water and continue stirring contents until cool. Change cooling water whenever it becomes warm.

For residents of communities where there is little or no pasteurized milk, the Surgeon General recommended that raw milk purchases be pasteurized at home, either by the two emergency methods recommended for disasters, or by one of the two following methods:

1. Heat the milk quickly in an open saucepan, stirring constantly, until the contents reach a tem-

perature of 165 F. A dependable cooking thermometer should be used. Then immediately place the saucepan in cold water and continue stirring the contents until they are cool. Change the cooling water when it becomes warm.

2. Use one of the approved home pasteurizers now on the market.

"Statistics of the Public Health Service show that consumers of raw milk are the victims of most of the outbreaks of milk-borne diseases in this country," Dr. Scheele explained.

#### Lilly Introduces New Product

Eli Lilly and Company introduces Ampoules Quinidine Gluconate, 0.08 Gm. per cc., 10 cc. (equivalent to 0.05 Gm. of quinidine alkaloid per cc.). This product is a stable aqueous solution which can be given intramuscularly to those individuals who require the prompt effect of quinidine or to those who cannot take it orally.

The solution may be given intravenously in extreme emergencies. Intravenous injection is especially indicated for the control of cardiac irregularities, including arrhythmia, which may overtake the anesthetized patient. Such situations occur more frequently when cyclopropane gas is used and during thoracic or upper abdominal surgery. In these circumstances, the parenteral administration of quinidine is a lifesaving measure.

The vital usefulness of this preparation suggests that it be made standard emergency equipment in every operating room, as well as in doctors' bags and offices.

#### Armour to Build New Drug Plant at Kankakee

Plans for a modern pharmaceutical plant for The Armour Laboratories, which will provide needed facilities for production of ACTH and other hormones, enzymes, and rare drugs, have been announced by F. W. Specht, president of Armour and Company. The plant which will be located north of the town of Bradley in Kankakee county, Illinois, will be known as the Armour Pharmaceutical Center.

The new plant will be the production center for Acthar, Armour's brand of ACTH; Tryptar, an enzyme now being investigated clinically; insulin, thyroid and liver extracts, pituitary, adrenal and gonadal hormones; together with various enzymes and certain other rare drugs of which Armour is in many cases the world's only source of supply.

## Classified Advertisement

### ANNOUNCING THE OPENING OF A MANUSCRIPT CLINIC

**SERVICES:** Medical papers edited, re-organized, or rewritten; references checked and completed; tables arranged; manuscripts retyped.

**DIRECTOR:** Mrs. E. W. Jackson, assistant editor of the NORTH CAROLINA MEDICAL JOURNAL, 1940-1950.

**ADDRESS:** 428 Stratford Road, Winston-Salem 5, North Carolina.

**RATES AND REFERENCES** given on request.

## AUXILIARY

From Rachel D. Davis, M.D. of Kinston, Chairman of the Advisory Board, come timely suggestions which we as Auxiliary members can help carry out in our public relations program:

1. Our national military strength is being built up to the point that it is stimulating all other phases of life in America to extra activity, and thereby is depleting the rank and file of many groups, particularly physicians and hospital personnel.

2. Because of the high regard in which physicians are held by the average layman, it is going to be difficult for the remaining medical personnel to meet the demands made on them by the public.

3. It is now time to begin an educational program through the schools, clubs, county medical auxiliaries, and such mediums of public education as the newspapers and radios, to lead the public to the point of not demanding the attention of a physician except in cases of actual illness yet not neglecting actual illnesses; of not demanding home visit if an early office visit can be comfortably and logically substituted; of not demanding private rooms and private nurses when these are not available, while still insisting on adequate medical care; and of being willing to give up the *luxuries* to which we have become accustomed in medical care. These programs will assure the people of adequate medical care, but will encourage them to ration their medical requirements in order to insure essential medical care for everyone.

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Has your Auxiliary placed framed copies of Sir Luke Fildes' *The Doctor* in local physicians' offices? Include this idea among your plans for the observance of Doctor's Day, March 30. The flower for the day is the red carnation.

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Haddon Hall will be the headquarters for the Annual Meeting of the Woman's Auxiliary to the American Medical Association, which will be held in Atlantic City, New Jersey, June 11-14, 1951. Requests for reservations should be sent immediately to Dr. Robert A. Bradley, Chairman A.M.A. Housing Bureau, 16 Central Pier, Atlantic City, New Jersey.



## BOOK REVIEWS

**Brucellosis: Clinical and Subclinical.** By Harold J. Harris, M.D., F.A.C.P. Ed. 2, revised and enlarged. 617 pages. Price, \$10.00. New York: Paul B. Hoeber, Inc., 1950.

The increasing importance of that baffling disease, brucellosis, makes the second edition of Dr. Harris's book most timely. The author has been for years an earnest student of brucellosis, and bases his work both on an exhaustive review of the literature and on his own experience with more than 700 cases.

To no other disease as common as brucellosis can the best known aphorism of Hippocrates be more truly applied: "Experience is fallacious and judgment difficult." Dr. Harris, however, has the ability to make a difficult subject easy to grasp; and anyone who reads the book with reasonable care will almost certainly know more about brucellosis than he did before. Although a sizable volume, it is such easy reading that one forgets its bulk.

The subject is discussed in orderly fashion, beginning with etiology and taking in turn epidemiology, pathology, symptomatology, diagnosis, prognosis, treatment, and prophylaxis. Since Dr. Harris is interested in psychiatry as well as in internal medicine (as every internist should be), and since brucellosis and psychoneurosis are often confused, it is natural for him to include a chapter on psychologic studies in chronic brucellosis.

The author admits that neither the diagnosis nor the treatment of brucellosis is too satisfactory; both require seasoned clinical judgment as well as the use of the known laboratory aids. He emphasizes that a skin test should never be done before an agglutination test. The final impression is that aureomycin is now apparently the best antibiotic, but that the time-tested vaccine still has an important place in the treatment of the chronic form of the disease. While brucellosis, if untreated, may last a lifetime, Dr. Harris leaves a feeling of optimism as to its response to careful, prolonged treatment. The book underscores the importance of laws requiring pasteurization of milk and milk products—cream, butter, buttermilk, and cheese—that are offered for sale.

Of particular interest to North Carolinians is the statement (page 73) that "North Carolina, the only state accredited in measures for eradication of brucellosis in dairy cattle, had the lowest rate among human beings for the twelve-year period from 1930 to 1941—0.4 per 100,000. Rates in other states varied from 0.98 to 3.34 per 100,000." This does not mean, however, that our state is free from brucellosis, and the possibility should be considered in the diagnosis of any prolonged obscure illness. Dr. Harris's book can be recommended as an excellent textbook on the subject.

**Paul Ehrlich.** By Martha Marquardt, with an introduction by Sir Henry Dale. 255 pages. Price, \$3.50. New York: Henry Schuman, 1951.

The old saying, "No man is a hero to his valet," might also include his secretary. If so, however, a notable exception is Miss Marquardt, who was Paul Ehrlich's secretary during the last thirteen years of his life. She has given us an excellent picture of this great man, from the vantage point of one who worked so closely with him that she learned all his mannerisms, his personal habits—such as smoking from twenty-five to fifty cigars daily—and his prejudices, as well as his capacity for infinite detail, his clarity of vision, and his tenacity

of purpose. Alternating chapters are devoted to Ehrlich as a tender, loving father and grandfather, and as a scientific genius.

Although Miss Marquardt does not let her understandable affection for Ehrlich blind her to his eccentricities, she does make her readers appreciate his greatness. One of his most striking traits was his ability to inspire his associates to work with him, and so enable him to accomplish far more than he could have done alone. At the same time, however, he kept in constant touch with all that was going on in his laboratories, and assumed personal responsibility for the use of his discoveries—notably Salvarsan, which was his crowning achievement. Ehrlich's name will always be remembered for his "side chain" theory of immunity, and for his farsighted vision of chemotherapy.

Miss Marquardt's excellent biography gives us a splendid conception of Ehrlich as a warmhearted human being, as well as a great scientist.

**A Syllabus of Laboratory Examinations in Clinical Diagnosis. A Critical Evaluation of Laboratory Procedures in the Study of the Patient.** Edited by Thomas Hale Ham, M.D., Assistant Professor of Medicine Medical School; Associate Director, Thorndike Memorial Laboratory; Junior Visiting Physician, Boston City Hospital. 496 pages. Price, \$5.00. Cambridge, Massachusetts: Harvard University Press, 1950.

Dr. Ham, who at the time of publication was assistant professor of medicine at Harvard Medical School and associate director of Thorndike Memorial Laboratory, is now on the staff of Western Reserve Medical School. There are, in addition, one hundred contributors to the book, among whom are listed most of the well known men of medicine around Boston, as well as a scattering of distinguished medical specialists from elsewhere.

The book is divided into seven sections: (1) Introduction to Laboratory Examinations; (2) Laboratory Examinations of Blood; (3) Laboratory Examinations Related to the Urinary System; (4) Laboratory Tests Related to Diseases of the Gastrointestinal Tract; (5) Special Tests Related to Infectious Diseases; (6) Special Tests Related to Diseases of Metabolism; (7) Special Tests Related to Extravascular fluids. Each section is written by one or more authorities in the field, and an excellent bibliography and many valuable charts are included.

The book is paper bound and reproduced by offset lithography, which tend to keep the cost low. It is, in the reviewer's opinion, the best book in its field, and will undoubtedly be adopted by many medical schools as a text in the course of laboratory diagnosis.

**Principles and Practice of Surgery.** By Jacob K. Kerman. 1378 pages. Price, \$15.00. St. Louis, Missouri: C. V. Mosby Company, 1950.

The author's stated aim to correlate basic medical science with the fundamental principles of surgery forms the sound foundation on which good texts of general surgery rest. This aim seems to have been adequately achieved in this book.

The body of the text is divided into five broad categories, the first four of which concern the changes wrought in living tissues by injury, interpreted in the broadest sense of the word. Based on this concept of reaction to injury, surgically significant disease is presented as it occurs across the spectrum from known to unknown etiology. The

fifth and largest section correlates the above fundamentals with surgical disease in specific organs and systems, as regards principles in diagnosis, treatment, and prognosis. The book is readable, well organized, amply illustrated, liberally documented with references, and should serve as a good surgical text.

## In Memoriam

ROBERT HERVEY LAFFERTY, M.D.  
1878-1950

Robert Hervey Lafferty died of acute leukemia in Charlotte, North Carolina, July 31, 1950, at the age of seventy-two, having been confined to bed less than two weeks.

Dr. Lafferty was born in Davidson, North Carolina, on August 28, 1878, the son of James Stewart Lafferty, M.D., a country doctor, and Hattie Kerns Lafferty. After receiving his A.B. and M.A. degree in chemistry from Davidson College, he taught in the schools of North Carolina and Florida for several years. He received his medical degree from the North Carolina Medical College and followed this with postgraduate work at the University of Chicago. He served as registrar and professor of chemistry and physiology at his Alma Mater for several years.

Dr. Lafferty began private practice in 1915, specializing in urology and radiology, and two years later he confined his practice to radiology. During World War I, he did all of the roentgenological work for Camp Greene, a camp of 65,000 men, in his office . . .

Dr. Lafferty was a member of the Mecklenburg County Medical Society, North Carolina Medical Society, Southern Medical Association, Fellow of the American Medical Association, American Roentgen Ray Society, and Radiological Society of North America, having served as vice-president and as a member of the Executive Committee. He was a charter member and Fellow of the American College of Radiology. He was one of a group that organized the Section on Radiology of the Southern Medical Association.

Dr. Lafferty was very active in religious and civic affairs of Charlotte. He was for thirty years superintendent of the Sunday School of the Second Presbyterian Church, and served as an elder in that church for many years. He had been a director of the Charlotte Y.M.C.A. and was on the local executive council of the Boy Scouts of America. For years he was interested in horticulture, and grew some of the finest iris this section of the country has ever seen, until forced to give up this work because of irradiation dermatitis of his hands, a product of his early work before the elements of protection were well understood. He had written many papers and recently had published a History of the North Carolina Medical College, and at the time of his death was working on a History of the Second Presbyterian Church of Charlotte.

He is survived by his wife, the former Edith K. Fry, and two sons, Dr. R. H. Lafferty, Jr., of Oak Ridge, Tennessee, and Dr. John O. Lafferty, who has been associated with his group since January, 1949.

Dr. Lafferty will be missed by an unusually large number of close friends and particularly by his associates. We all feel, however, that we are better doctors and men for having known him and having been associated with him.

O. D. BAXTER, M.D.

## LORENZO DOW BRYAN, M.D.

Doctor Lorenzo Dow Bryan died at his home at Sneads Ferry, North Carolina, on December 3, 1950. Dr. Bryan was the son of Lorenzo Dow Bryan and Clara White Bryan. He was born in Onslow County on January 30, 1885, near Richlands. He attended public school at Richlands, from where he went to Buies Creek Academy. After graduating from Buies Creek and the University of North Carolina, he entered Tulane Medical College at New Orleans, from which he received his M.D. degree. He stood the State Board examinations, and received his license to practice in Louisiana, Mississippi, and North Carolina, electing to settle in his native state.

Dr. Bryan chose to do general practice in the then rugged country on lower New River. He was a country doctor in the true sense of the word. He was able to minister to his people in most of their ills from the time of birth to old age. In doing this he was loved by all his neighbors and his patients. The confidence his patients had in him was profound. They came to him with their troubles, whether illnesses requiring medical treatment, financial troubles, family troubles, or religious difficulties. He had a bit of kind advice for each of them, and they loved him for it.

In the field of obstetrics Dr. Bryan was a pioneer in the prenatal care of the mother. In his early days, mothers rarely came to the doctor before delivery. He encouraged them to have periodic check-ups, and in the latter days of his life he devoted much time to prenatal clinics for the health department.

Dr. Bryan was a good citizen of our county. He took an active part in civic enterprises. He was vitally interested in the schools of the county, having served on the County Board of Education. Even with a tremendous practice which required practically the whole twenty-four hours of the day to carry on, he was able to look in on the schools at times.

Therefore be it resolved: (1) That we are grateful to Almighty God that we were able to have such a man in our community; (2) That we extend to his family our most sincere sympathy; (3) That a copy of this resolution be sent to his wife and to our state Journal.

W. T. TURLINGTON, JR., M.D.  
S. C. COX  
WILLIS E. MEASE, M.D.

## Doctors Cite Dangers of Vitamin D Poisoning

The dangers and toxic effects among patients who take excessive amounts of vitamin D are discussed by three physicians in the current (January) issue of *The American Journal of Roentgenology and Radium Therapy*, which is published primarily for physicians who specialize in x-ray diagnosis and treatment.

Doctors are being confronted with more and more cases of vitamin D poisoning, which holds considerable interest to x-ray specialists because of bone involvement.

The doctors making the report are: William R. Christensen, Charles Liebman and Merrill C. Sosman, of Boston, Massachusetts.

Development of toxic effects from vitamin D requires very high dosage—up to 500,000 units per day. The vitamin is usually prescribed for arthritis, rickets, conditions involving softening of the bones and in various allergic cases.

In cases where the poisoning occurs there is a decrease in bone density, abnormal deposits of bone salts and excessive excretion from the body of calcium and phosphorus.



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## CONVULSIVE DISORDERS IN CHILDREN: A STUDY OF THE DUKE HOSPITAL PEDIATRIC CONVULSIVE CLINIC

IRVING PINE, M.D.\*

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DURHAM

and

HARRY B. O'REAR, M.D.†

AUGUSTA, GEORGIA

In January, 1948, a special Thursday morning outpatient clinic was established at Duke Hospital for the examination and treatment of children with convulsive disorders. The clinic was first under the direction of Dr. Hans Lowenbach from the department of neuropsychiatry, and Dr. H. Grant Taylor of the department of pediatrics. The pediatric house physician, the resident, and intern staff constituted the remainder of the clinic staff.

During the period from January, 1948, to June, 1950, 200 new patients were seen. Of these 10.5 per cent presented diagnostic problems which, in the final analysis, were not found to be convulsive. The remaining 179 had convulsive disorders of one type or another. With the convulsive clinic serving as a base, these patients were studied by the department of biochemistry, the eye, ear, nose and throat department, the allergy clinic, the department of neurosurgery, the Child Guidance Clinic, the electroencephalography laboratory, and the department of social service. They received their general care from the Pediatric Clinic. Although most procedures were carried out on an outpatient basis, facilities were available in the pediatric ward for the hospitalization of patients requiring ventriculograms or surgical procedures. A complete review of the 200 patients is presented in this study.

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### *Onset and Duration of Disorders*

Of the 179 children with seizures the large majority had been less than 5 years old at the time of their first convulsion. Table 1 shows the details of this relationship. It will be seen that 33 patients (18.4 per cent) had convulsions before the age of 1 year; 39 (21.2 per cent) had convulsions between the ages of 1 and 3. In all, 102 (57 per cent) had convulsions before they were 5 years old; and 27.4 per cent, between the ages of 5 and 10. Only 28 (15.6 per cent) had the onset of convulsions after the age of 10 years. An interesting relationship brought out in table 1 is that 92 (51.3 per cent) of the patients had been having convulsions for more than one year at the time they were seen in our clinic. Only 34, or 19 per cent, were seen during the first month after the onset of seizures (table 1).

### *Etiology*

Of the several factors that enter into the causation of epilepsy, heredity, birth injury, trauma, and central nervous system disturbances resulting from other causes were studied in this review.

### *Heredity*

The influence of heredity is particularly hard to evaluate. Figures cited by various authors indicate that from 18 to 28 per cent of convulsive patients have a family history of convulsive disorders. The incidence of positive family histories in control groups throughout the country ranges from a maximum of 10 per cent to a minimum of 4 per cent. Of the 179 patients in our series, 42 had

Table 1  
Onset and Duration of Disorder

Duration*	Patients' Age (Yrs.) at Time of Onset											
	1	2	3	4	5	6	7	8	9	10	11	12
1 week	3	7	0	2	1	1	1	3	0	2	0	2
1 month	1	3	2	4	0	0	1	0	0	1	0	0
1 year	10	7	4	0	4	5	1	5	4	6	3	4
1 to 2 years	3	7	1	4	2	2	1	1	1	2	4	0
2 to 5 years	11	8	2	6	3	4	1	4	1	2	1	0
5 to 10 years	3	5	0	5	1	0	0	1	1	0	1	0
Over 10 yrs.	2	2	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>33</b>	<b>39</b>	<b>9</b>	<b>21</b>	<b>11</b>	<b>12</b>	<b>5</b>	<b>14</b>	<b>7</b>	<b>13</b>	<b>9</b>	<b>6</b>

\*Before patient was seen in the Convulsive Clinic.

a positive family history. The histories were weighed according to Bridge's system<sup>(1)</sup>, whereby a convulsive disorder of any kind in a parent or a sibling receives a rating of 2 plus, and a disorder in any other member of the family a rating of 1 plus. Evaluated in this way, 76.4 per cent of the patients seen in our clinic were found to have no family history of convulsive disorders. Two and two tenths per cent received a rating of 4 plus, 2.2 per cent a rating of 3 plus, 6.1 per cent a rating of 2 plus, and 12.8 per cent a rating of 1 plus. These figures show that the factor of heredity was prominent in only 10.5 per cent of the patients, whereas 23.5 per cent had a positive family history (table 2). The general conclusion of Penfield and Erickson<sup>(2)</sup> seems applicable to our patients—namely, that a predisposition toward convulsive disorders may be inherited, but not the disorder itself.

#### Factors surrounding birth

The incidence and nature of factors surrounding the birth of children which may have contributed in some degree to the convulsive disorder are shown in table 3. Of the 7 premature infants included in this series, 4 developed convulsions during the first year of life, 1 developed convulsions in the second year of life, and 2 developed convulsions in the eleventh year of life. The history of prematurity may be coincidental in the 2 patients who developed epilepsy in the eleventh year of life; the history in the other 5 is, in all probability, significant.

Experience has shown<sup>(3)</sup> that 45 per cent of all premature infants examined at autopsy have diffuse hemorrhage over the surface of the brain, and that a large percentage of those that survive develop major seizures early in life. Bridge states that prematurity appears to predispose to epilepsy by increasing the incidence of the usual type of birth injuries.

Table 2  
Hereditary Factor in 179 Patients with Seizures

Family History	No. Patients
0	137
1+	23
2+	11
3+	4
4+	4
0 —Negative	
1+—Convulsive disorder in any member of the family	
2+—Convulsive disorder in sibling or parent	

Table 3  
Incidence of Contributive Factors Associated With Birth

Factors	No. Patients
Premature birth	7
Forceps delivery	15
Anoxia (Cyanosis)	5
Spastic hemiplegia	3
Contracted pelvis in mother	2
Version and extraction	2
Breech delivery	2
Spastic from birth	3
Induced labor	2
Cesarean section	1
Subdural hematoma	1
Precipitous delivery	1
<b>Total</b>	<b>44</b>

#### Trauma and illness

A total of 64 patients had a history of trauma or illness leading to a disturbance of the central nervous system. Seventeen of these had definite trauma to the head. In only one patient was roentgenographic evidence of trauma found. All patients with a history of post-traumatic unconsciousness, vomiting, or disorientation for an appreciable period of time, as well as 4 patients with a probable history of trauma, were included in the classification. In two cases the head was injured in a fall that was immediately followed by a convulsion. It is difficult in these 2 cases to determine if the fall was the result of a seizure or if the seizure was the result of the fall.

In 21 patients the first convulsion occurred during an episode of fever. This represents a small proportion of all children with a history of one or more convulsions. Penfield and Erickson<sup>(2)</sup>, and Bridge<sup>(1)</sup> believe that if all children with febrile convulsions were followed throughout childhood, many would be found to be convulsive. Hemiplegia and other localizing signs occur frequently in children who have convulsions following a febrile episode, suggesting that definite damage to the central nervous system occurred, and that convulsions are a manifestation of a residual



Table 4

## Presumptive Precipitating Factors Leading to a Disturbance of the Central Nervous System

Factors	No. Patients
Fever of undetermined origin .....	21
Definite trauma to the head .....	17
Otitis media .....	5
Respiratory tract infection .....	4
Measles .....	4
Pertussis .....	4
Mumps .....	1
Congenital syphilis .....	2
Encephalitis, undetermined type .....	2
Measles encephalitis .....	2
Toxoplasmosis .....	1
Ethyl alcohol poisoning .....	1
Brain tumor .....	2
Gaucher's disease .....	1
Agensis of corpus callosum .....	1
<b>Total</b> .....	<b>68</b>

focus of cerebral irritation (table 4).

#### Other factors

Besides trauma and illness accompanied by fever, other possible precipitating factors were encountered in 30 patients. Although it is not always possible to determine the mechanism by which any illness or precipitating factor produces convulsions in a given patient, each of the conditions listed in table 4 has been known to precipitate a convulsive disorder.

It is interesting to note the overlap between patients with precipitating factors and patients with proven or presumed cerebral birth injuries. Twenty-seven patients are found in both groups. Of the 44 who had family histories of epilepsy, 4 had both a precipitating factor and cerebral injury, 7 had a birth injury in addition to a family history of convulsions, and 9 had a precipitating factor as well as a positive family history. Twenty-four patients had a positive history without other factors. When the total picture of this group of patients and the overlap referred to above are considered, there is only presumptive evidence of the etiology of "epilepsy" in 109 patients. This leaves 70 patients, or 39.1 per cent, whose histories give no hint at all as to the etiology of their disorders.

The etiology of "epilepsy" is variable, and in most cases must be taken to be a combination of several factors. Nevertheless, there still remains a large group of cases in which the etiology can not be determined. A continuous search for causes must be the basis for all knowledge that will aid the patient and reward the physician.

#### Diagnosis

##### Procedures

At the patient's first visit a history was obtained and a complete physical examination was made in the Pediatric Clinic. A preliminary diagnosis was established next, and appointments with the department of radiology, the electroencephalography laboratory, and the Convulsive Clinic were scheduled. Further diagnostic procedures, if indicated, were planned, and treatment was prescribed at the Convulsive Clinic conference.

Roentgenograms of the skull, including PA and lateral stereoscopic views, were made in 106 (59 per cent) of the cases studied. Nine showed significant abnormalities. Ventriculograms were made by the department of neurosurgery in 18 cases, and 2 patients with brain tumors were subsequently operated upon.

Dees and Lowenbach<sup>(4)</sup> have reported the electroencephalographic records in a previous series of allergic children with convulsive disorders. Dr. Susan Dees follows up all of our patients who have a history of allergy, who show evidence of allergy by skin testing, or whose electroencephalograms show a predominant occipital dysrhythmia.

Of the 179 patients 61 (33.9 per cent) were found to be mentally retarded. This judgment was made by evaluating the patient's clinical behavior, with the additional help of psychometric testing. Nineteen patients were given special psychometric tests, and some were tested repeatedly for evidence of improvement or regression in mental capacity under therapy. The results were of value in determining the clinical approach to the individual patient, but not in determining the effect of treatment on intellectual capacity. Ten of the children were referred to the Child Guidance Clinic for further treatment and disposition.

##### Types of seizures

Many children with a history of fits or seizures were found, when their behavior and fit-like activity were described, to be non-convulsive. An accurate description of the seizure was found to be the most helpful aid in the diagnosis.

The course and development of the seizures, as well as their number and frequency, varied in each patient. The individual and symptomatic nature of convulsions makes it necessary to conduct all indicated clinical studies in order to determine and assess the

Table 5

## Types of Seizures in 179 Convulsive Patients

Seizures	No. Patients	Per Cent
Major		
Grand mal alone	123	68.7
Major focal alone	11	6.2
Major and minor	20	11.0
<b>Total</b>	<b>154</b>	<b>85.9</b>
Minor		
Minor seizures	15	8.3
Petit mal	7	3.9
Psychomotor	3	1.8
<b>Total</b>	<b>25</b>	<b>14.0</b>

etiologic, contributing, precipitating, and other factors related to convulsions, rather than merely to diagnose and classify the disorder. Progress in the field of convulsive disorders will be greater as diagnosticians utilize the facilities to investigate, as comprehensively as possible, the nature and origin of these "seizures," rather than accept the terms "genetic," "idiopathic," or "hereditary," as applied to patients.

With regard to description, the value of greater precision in defining *petit mal* was realized; and the simple seizure, characterized by staring or blinking eyes and the temporary suspension of activity, came to be recognized as the true *petit mal* seizure. The practice of grouping akinetic seizures, massive myoclonic jerkings, and other minor motor seizures with *petit mal* has been discontinued in our clinic. When the term *petit mal* is used too broadly, it serves to obscure the nature of minor seizures and non-convulsive diagnostic problems are thus overlooked. The seizures found in the present series are classified in table 5.

The higher percentage of major convulsions in our series is striking. It is likely that this figure can be explained by the large territory (about 40,000 square miles) from which our clinic draws its patients, and by the fact that many patients with minor seizures are treated in their own community by their local physicians. Patients with major seizures are more often sent to this clinic for the further study and evaluation of their treatment than are those with minor seizures. Of the patients having major seizures, a total of 20 had *grand mal* in combination with other types of seizures (table 6).

Children with seizures often experience head trauma during their first convulsion. Although 17 patients had a definite history of trauma, with or without neurologic evi-

Table 6

## Mixed Seizures (Major and Minor) in 20 Patients

Seizures	No. Patients
Grand mal, major focal	2
Grand mal, major focal, minor focal	1
Grand mal, minor motor	9
Grand mal, akinetic	2
Grand mal, petit mal	5
Grand mal major focal, petit mal	1
<b>Total</b>	<b>20</b>

dence pointing to the site of the lesion, some experienced *grand mal* epilepsy, and a few had major focal seizures. Walker<sup>(5)</sup> has stated that a history of accident or trauma is not valid unless the seizures occur within two years of the injury. The number of patients in this series is too small to evaluate trauma as an etiologic factor or to establish a clear relationship between trauma and focal seizures.

In the group of patients with a combination of major and minor seizures were those who experienced varied types of major seizures, with intermittent minor seizures. This group of patients presented the problem of the progression of convulsive disorders, not only in relation to the evolution of the illness, but also with respect to the effects of treatment. During treatment a *grand mal* type of seizure may become aborted or appear as a residual type of minor seizure; or conversely, a minor seizure may develop into a major seizure or a combination of seizures. It is worth noting that without treatment 20 of our patients experienced mixed seizures, or what has been called a combination of major seizures with other types.

Three patients with psychomotor epilepsy are included in the group of 25 patients with minor types of seizures. The seizures of these patients were atypical, and for the most part their activity could be classed as "psychic." They would run to their parents and complain of some vague fear or difficulty, and then appear to be out of contact with reality, dazed, or bewildered. Some patients with psychomotor seizures experience *grand mal* convulsions. In order to be evaluated correctly, these patients should be separated from those who experience psychomotor (psychic, random motor, or automatism) seizures, without major tonic or clonic movements.

Only 7 patients with classic *petit mal* were found in the group with minor seizures. The 4 patients with akinetic seizures experienced "jack-knifing" or "salaam" and fell to the



Table 7  
Types of Minor Seizures in 25 Patients

	No. Patients
Minor motor .....	9
Akinetic .....	4
Minor focal .....	1
Jacksonian .....	1
Petit mal .....	7
Psychomotor .....	3
<b>Total</b> .....	<b>25</b>

floor, but quickly resumed their former activity. Minor motor seizures varied in severity, and the type of attack was not constant in any given patient. Nine patients in this group had seizures of rather brief duration, with quick resumption of activity, although the seizure time was longer than that seen in *petit mal* or akinetic seizures. One patient experienced the classic Jacksonian seizure without loss of consciousness. Another patient, with what was classified as a minor focal seizure, had sudden clonic movements of one arm and adverse movements of the head which did not spread or cause the loss of consciousness (table 7).

Among 21 patients in the clinic, behavior problems, chorea, fainting, breath-holding, and other complaints were found to be symptoms of non-convulsive conditions (table 8).

The history and the description of the attacks were most important in separating the group of patients with non-convulsive disorders from those with convulsive disorders, especially those with minor seizures. We feel that many non-convulsive patients may be treated needlessly with anticonvulsive medication for prolonged periods of time, if the differential diagnosis is not considered in every patient with minor seizures. Of the total group of 200 patients seen in our clinic, the 25 patients diagnosed as non-convulsive accentuate the necessity for careful diagnosis.

#### *The Electroencephalogram and Types of Convulsive Disorders*

The electroencephalogram (EEG) is an important aid in the diagnosis, treatment, and study of patients with convulsive disorders. It is also a valuable tool in following the progress of patients in whom an underlying disease is often the cause of seizures.

Electroencephalographic recordings were made on 177 of the 200 patients in this series. Because of failure to obtain cooperation for the test procedure before second sleep

Table 8  
Non-Convulsive Symptoms and Conditions

	No. Patients
Behavior problems .....	8
Chorea .....	2
Fainting .....	2
Breath holding .....	2
Tic or habit spasm .....	1
Cerebral palsy .....	1
Clumsiness .....	1
Vague staring .....	1
Headache .....	1
Bizarre movements .....	1
"Startle" reactions .....	1
<b>Total</b> .....	<b>21</b>

records were instituted, 23 patients were not tested.

The records were classified according to the type of abnormality present. The reader of the EEG knew only that the diagnosis of a convulsive disorder was to be considered; the type of seizure was unknown. A list of the EEG's was made following the Gibbs classification<sup>(6)</sup>. Normal records are obtained from children as well as from adults with convulsive disorders. In our series, out of 161 epileptic children who had EEG's, 133 (82.6 per cent) had abnormal records.

Occipital abnormalities or slow waves predominately in the occipital regions occur in many children without epilepsy, especially when paroxysmal activity is not demonstrated in the record. Henry<sup>(7)</sup> and Cohn<sup>(8)</sup> consider such a finding in children as borderline, or not definitely abnormal. In the group of epileptic children were 16 patients with occipital abnormalities. When these are added to the 28 with normal records, 117 (72.7 per cent) with definitely abnormal records remain (table 9).

A total of 16 children who had EEG's were diagnosed as non-convulsive patients in the Pediatric Convulsive Clinic. Of these 8 had normal records, 3 had occipital abnormalities, leaving 5, or 31.3 per cent, with definitely abnormal records. Hence the EEG was a helpful tool in the diagnosis of convulsive disorders in approximately 7 out of 10 patients. If the recurrent and random episodic nature of convulsions is considered together with the possibility of stable patterns of electrical activity between seizures, the practical value of the EEG will be enhanced.

A classification of the EEG's in correlation with the various types of seizures was made (table 10). Under major seizures are grouped the *grand mal*, major focal, and combined major seizures (with or without

Table 9  
Electroencephalograms of 177 Patients

Types of Seizure	EEG Classification							No. Patients
	Normal	Occipital Abnormalities	Focal Abnormality	General Abnormality	Fast Bursts	Slow Bursts	2 per sec. Variant	
Total Convulsive .....	28	16	15	42	2	29	20	161
Non-Convulsive .....	8	3	1	3	—	1	—	16
							Total	177

Table 10  
Electroencephalograms of 161 Patients with Major and Minor Seizures

Types of Seizure	EEG Classification							No. Patients
	Normal	Occipital Abnormalities	Focal Abnormality	General Abnormality	Fast Bursts	Slow Bursts	2 per sec. Variant	
Major .....	25	14	13	37	2	25	17	137
Minor .....	3	2	2	5	—	4	3	24
							Total	161

minor seizures). Under minor seizures are grouped the minor motor seizures (including the massive myoclonic jerks) akinetic seizures, *petit mal*, psychomotor seizures, and all other minor seizures. A strict correlation between the type of EEG and the type of seizure or convulsion does not exist.

All authors agree that the 3 per second spike and dome complex (fast spike and wave) occurs in closer correlation with *petit mal* than with other types of seizures. Gibbs and Lennox<sup>(9)</sup> have reported that in 82 per cent of patients with a history of *petit mal*, the characteristic 3 per second alternate dart and dome formation is present in electroencephalographic examination, which includes a short period of hyperpnea. The typical 3 per second spike and wave or dart and dome complexes occurred in 5 out of 7 of our patients with classic *petit mal*. In one other patient, a 2 per second spike and hump formation occurred. Thus, of the 9 patients whose records demonstrated the regular or typical 3 per second spike and wave complex, 4 were experiencing major seizures.

Gibbs, Gibbs, and Lennox<sup>(10)</sup> reported that the variant type of *petit mal* paroxysm occurs more often in children than in adults, and is associated usually with organic brain pathology. The term "*petit mal* variant," used in describing these records, refers to the electrical pattern and not to any type of

clinical seizure. The *petit mal* variant, or the slow spike and hump complex, occurred in 17 (12.2 per cent) of the 137 patients with major seizures, and in 3 (12.5 per cent) of the 24 patients with minor seizures. Thus, even the characteristic findings of regular and variant types of spike and wave paroxysms of electrical activity, although highly suggestive of epilepsy, are not by themselves typical of any clinical type of seizure (table 10).

The slow wave paroxysm occurred in 25 of the 137 patients with major seizures. Many records with predominantly fast wave activity were classed with the generalized abnormalities or cerebral dysrhythmias, since paroxysmal discharges did not occur.

Only one of the patients showed a definite temporal spike focus. This patient also showed a more characteristic *petit mal* variant focus, with slow spike and wave paroxysms, however, and was therefore classed in the 2 per second spike and hump group. When all the paroxysmal records are combined, they form the largest group in this series. Paroxysmal seizure discharges occurred in 60 out of 161 convulsive patients (37.2 per cent) (table 11).

A generalized cerebral dysrhythmia or generalized abnormality was found in 42 (26.1 per cent) of the 161 patients with convulsive disorders and in 3 out of 16 patients



Table 11  
Number of Paroxysmal Records in 161  
Convulsive Patients

	No.
Spike and Wave ( <i>petit mal</i> ).....	9
Slow spike and Hump ( <i>petit mal</i> variant).....	20
Slow wave paroxysms .....	29
Fast wave paroxysms .....	2
<b>Total</b> .....	<b>60</b>

with non-convulsive disorders. The broader term "generalized abnormality" is often used to indicate the non-specific nature of this type of record. Actually the difference between dysrhythmia and generalized abnormalities is difficult to distinguish and classify, especially in children. In the absence of definite paroxysmal activity, many patients with non-convulsive disorders examined at the Duke Hospital electroencephalography laboratory have shown generalized abnormalities or cerebral dysrhythmias. Such records were seen in 37 patients with major convulsions, and in 5 patients with minor convulsions.

Focal abnormalities were not always diagnostic of unilateral or focal seizures. In 15 such records, 4 correctly lateralized the side involved by the major focal seizures. The remaining 11 records were obtained from 5 patients with *grand mal* convulsions, 4 patients with combined seizures, 1 patient with minor motor seizures, and 1 patient with *petit mal*. One cannot infer from these findings that lateralization was incorrect, because this focus may have been responsible for the non-focal type of convulsion. The classification of the 161 convulsive patients is summarized in table 12.

The electroencephalographic examination is a necessity in the management of patients with convulsive disorders. In children the

record has a high degree of specificity only in *petit mal*. Nevertheless, with the wider use of this examination more accurate check of the patient's progress and condition is possible.

### Management

The management of children with convulsive disorders entails a constant search for the underlying cause and alteration of the symptom complex, as well as the recognition of factors that contribute to the severity and frequency of the attacks. Ultimate success in the management of convulsive disorders depends on the ability of the physician to prevent the occurrence of seizures<sup>(11)</sup>. The economic, social, and psychologic rehabilitation of the patient should go hand in hand with the use of anticonvulsant drugs. Explaining the nature of convulsive disorders to the parent is frequently the most important aspect of treatment. A substantial part of each interview should be devoted exclusively to talking with the parents.

### Drugs and Toxicity

Although the established anticonvulsant drugs are effective in controlling seizures, in most cases they cannot be considered as a cure of epilepsy. No drug is effective in controlling all types of seizures, and the intelligent choice of treatment depends on the type or types of seizures that are present in each patient. It is necessary to use the proper drug in optimum dosage for the different types of seizures. From Lennox we may do well to borrow the quotation: "Good therapy means individual treatment for each individual patient and his particular type of seizure."<sup>(12)</sup>

The anticonvulsant drugs used chiefly in this clinic were Dilantin, phenobarbital, Tri-

Table 12  
Electroencephalograms of 161 Convulsive Patients  
EEG Classification

Types of Seizure	Normal	Occipital Abnormalities	Focal Abnormality	General Abnormality	Fast Bursts	Slow Bursts	2 per sec. Variant	3 per sec. Spike & Wave	No. Patients
Combined .....	1	1	4	5	—	2	3	2	18
Grand mal .....	21	12	5	31	2	22	13	2	108
Major focal .....	3	1	4	1	—	1	1	1	11
Minor types .....	3	2	1	4	—	3	1	—	14
Petit mal .....	—	—	1	—	—	—	1	5	7
Psychomotor .....	—	—	—	1	—	1	1	—	3
								<b>Total</b>	<b>161</b>

dione, and Mebaral. Less frequently used were Mesantoin, Thiantoin, Phenurone, and glutamic acid. Initial dosages were established with respect to particular age groups. Gradual adjustment to the individual patient, however, is the only available method for establishing adequate control of convulsions. Combinations of drugs, as determined by the clinical progress of the individual patient, were used to good advantage.

#### *Dilantin*

Dilantin, either alone or in combination with other drugs, is the most effective remedy in controlling *grand mal* and minor motor seizures. It was administered to children under 1 year of age in dosages ranging from 30 mg. at bedtime to 15 mg. three times a day. To children from 1 to 10 years old it was administered, alone and in combination with other drugs, in dosages ranging from 30 mg. twice daily to 100 mg. four times daily. The most frequently administered dosage was 100 mg. three times daily, in combination with 30 mg. of phenobarbital morning and evening. In children above the age of 10 years the effective dosage ranged from 60 mg. three times daily to 100 mg. four times daily, depending on the clinical response of the patient. Our average patient required 100 mg. four times daily, in combination with 30 mg. of phenobarbital given three times daily.

#### *Phenobarbital*

Phenobarbital is seldom used alone except in children with nocturnal convulsions and in the age group below one year. In the latter, elixir of phenobarbital is given in doses of 4 cc. from one to four times daily. Phenobarbital is a most useful agent in controlling nocturnal seizures. Some children can be controlled on a single bedtime dose of 60 mg., while others require more. In our experience, with the aforementioned exceptions, lethargy and drowsiness preclude the use of this drug alone in effective quantities. One or two children were able to tolerate 100 mg. doses three times each day.

#### *Mebaral*

Mebaral was used almost exclusively in combination with Dilantin, particularly in those cases in which phenobarbital produced undesirable drowsiness. It is used in approximately double the usual dose of phenobarbital.

#### *Tridione*

In our clinic the use of Tridione has been limited for the most part to those children with *petit mal* seizures who demonstrated a 3 per second dart and dome paroxysm on the EEG. Only in rare cases has it been used in other types of minor seizures, and then only when the EEG showed the typical 3 per second dart and dome paroxysm. The dosage of Tridione was 0.3 Gm. administered twice to four times daily, depending upon the age of the patient and the severity of the seizure. We have at times used Tridione in conjunction with other drugs, such as Dilantin, phenobarbital, Mesantoin, Thiantoin, and Phenurone.

#### *Mesantoin*

Mesantoin has been tried and is occasionally effective in patients above 3 years old with *grand mal* or minor seizures which cannot be controlled with Dilantin or phenobarbital.

#### *Thiantoin*

Thiantoin has had only limited trial in this clinic, and at present only 3 patients with *grand mal* and one patient with *petit mal* are receiving the drug. All 4 were unresponsive to treatment with the usual drugs, and are doing better with Thiantoin.

#### *Phenurone*

Phenurone has been tried with only 6 patients, and is being continued, with some improvement, in only 3. Our experience is still too limited for us to offer any comment on this drug. We have seen no evidence of damage to the liver in this small group. The drug was discontinued in one case when the child became a behavioral problem while under treatment.

#### *Glutamic acid*

Although glutamic acid has been given an extensive trial in all types of disorders, it has not been used in our clinic since October, 1949. The only tangible effect was an over-all elevation of mood in most of the patients taking the drug. There was no significant increase in performance on repeated intelligence tests.

#### *The ketogenic diet*

The ketogenic diet has been tried repeatedly, but patients do not like it, and it has proved too expensive for the economic group attending the clinic. We have no example of a patient who has followed the diet, even



reasonably well, throughout their clinic visits.

### *Toxic Effects*

Therapeutic agents produced toxic effects in a relatively small percentage of the patients treated. Gingival hypertrophy was demonstrable in 23 patients using Dilantin and marked in 4. Meticulous attention to oral hygiene has a marked inhibitory influence on the process. Drowsiness was the only other complication seen with the use of Dilantin, and this was marked in only one patient. Two patients have since developed some ataxia from the drug.

In one of the patients treated with Tri-dione, leukopenia developed after nine months of treatment; this condition did not recur when treatment was resumed. Photophobia developed in one other patient, necessitating a temporary change in therapy.

With phenobarbital one patient became a behavioral problem; the condition was corrected as soon as the drug was discontinued. Drowsiness was a common complaint with phenobarbital; however, few patients had to be taken off the drug for this reason.

With the use of Phenurone one patient had nausea, vomiting, and an erythematous rash, which subsided shortly after the drug was discontinued.

While taking Mesantoin, one patient developed an erythematous rash, but therapy with this agent was resumed one month later, and the rash has not recurred. One patient complained of difficulty in daylight vision with Thiantoin, and the drug was discontinued.

The relatively low incidence of toxic effects of this group of anticonvulsant drugs should be considered as fortuitous, and should, in no way, lessen one's vigilance. Symptoms, signs, and laboratory evidence of toxicity should be sought for on each visit of the patient. Any sudden change in the status of a patient should be considered from the standpoint of toxicity.

### *Causes of Delayed Diagnosis*

Since the advent of the newer anticonvulsant drugs, the chief factor in successful therapy has been diagnosis. In reviewing the records of this clinic, we find that a large number of patients had seizures which were not adequately diagnosed until after several visits. The factors delaying diagnosis were considered to be: (1) The patient was seen early in the course of his disorder, before all

of the clinical manifestations were present; (2) the patient and the parents were not good observers; (3) the typical expression of the convulsion was masked by previous medication; (4) the patient had more than one type of convulsion; (5) a behavioral disorder or other non-convulsive seizure closely resembling a convulsion occurred; (6) the clinician occasionally failed to record an accurate description of the seizures. The latter failure might have been due to (1) the first and second factors listed, (2) an inaccurate description of the seizure, (3) the omission of significant facts in recording the patient's history, (4) the misinterpretation of statements made by the informant. These factors account for some delay in the control of the seizures. More specific attention paid to these seemingly relatively minor points will aid in more rapid evaluation of the patient as a means to adequate treatment.

### *Summary*

1. The experiences of the Duke Pediatric Clinic with convulsive disorders in children during the two and a half year period from January, 1948, to June, 1950, have been described.

2. Data obtained from the charts, personal observation of the patient, and various studies performed to aid the diagnosis and treatment of 200 patients have been outlined. The study included 179 patients with a diagnosis of seizures, and 21 patients who were eventually diagnosed as non-convulsive.

3. This study stresses the fact that recurrent seizures are symptomatic of conditions causing cerebral disorganization. Such an approach aids in the diagnosis of many diseases whose presenting symptoms are convulsions.

4. A strict correlation between the type of the electroencephalogram and the type of seizure does not exist. Yet the electroencephalogram is a valuable aid in diagnosis and treatment of patients with seizure activity.

5. Treatment must be directed to help the child with seizures, not only with anticonvulsant medication, but also by efforts toward rehabilitation, guidance and greater understanding of his malady.

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## DIAGNOSIS AND MANAGEMENT OF COLONIC AND RECTAL POLYPS

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A polyp or polypus is a smooth and pedunculated growth arising from a mucous surface. The term is not specific, since it refers only to the form or shape of a growth.

We have limited our study to simple adenomas—that is, adenomatous polyps—found in the large bowel and rectum. A patient with a papillofibroma—that is, a hypertrophied anal papilla—is sometimes told that he has a polyp. This growth is not a true adenoma, however, and has no relation to the subject being discussed.

No attempt will be made to discuss the histopathology of adenomas, but one important point should be made: *All true adenomatous polyps of the large bowel are potentially malignant.* Mayo<sup>(1)</sup>, Bacon<sup>(2)</sup>, Jones<sup>(3)</sup> and others have stated that *all* true adenomatous polyps become malignant if they are left long enough. Lockhart-Mummery and Dukes<sup>(4)</sup> stated that simple adenomas, whether single or multiple, eventually show malignant characteristics, and they consider the adenoma merely a stage in the development of a malignant tumor.

### *Types of Polyps*

Polyps may be true polyps, and pseudopolyps. The latter type is considered secondary to an inflammatory condition such as chronic ulcerative colitis. Most writers today

differentiate between isolated adenomas and the entity commonly known as polyposis<sup>(5)</sup>. We are omitting any discussion of the subject of polyposis as we understand it.

Adenomas may be single or multiple, sessile or pedunculated, with a stalk which may be several inches in length. In its incipency, the polyp appears as a slight elevation of the mucous membrane, but as growth progresses it presents a rounded surface and may assume a lobular shape. Adenomatous polyps constitute the most common type of benign tumor found in the rectum and sigmoid<sup>(4,6)</sup>, and as has already been stated, all of them eventually become malignant if they are not removed.

### *Analysis of a Series of Twenty-Nine Cases*

This discussion is based upon a study of 29 patients with 32 adenomas who were seen during the past two years in a private proctologic practice.

*Age and sex incidence.* The youngest patient in the series was 3 years old, and the oldest was 75 (table 1). The greatest incidence was found among patients in the fourth and fifth decades of life, who made up 48.3 per cent of this series; 17.3 per cent of the cases, however, were in children. Almost three fourths of our patients—72.5 per cent—were males. Ault, Castro, and Smith, at the recent meeting of the Southeastern Surgical Congress, reported that in a series of 352 adenomas occurring in 270 patients the incidence was equally divided between the sexes. Only 5 per cent of their cases occurred in children. All the series we reviewed<sup>(2,5,6,7)</sup> showed the incidence to be greater in males than in females.

Table 1  
Age and Sex Incidence of  
Colonic and Rectal Polyps in 29 Cases

AGE (Years)	No. Cases	Percent.
3 - 14	5	17.3
20 - 30	1	
31 - 40	4	
41 - 50	8	48.3
51 - 60	6	
61 - 75	5	
SEX		
Males	21	72.5
Females	8	27.5

### *Size, location, and number*

Polyps vary in size from 2 mm. to 10 cm. The smallest in this series was 2 mm., and the largest, 3.5 cm. They are most commonly found in the rectum, rectosigmoid, and sigmoid. In this series more than 90.5 per cent



of the growths were visible through the sigmoidoscope. In the series reviewed by Ault, Castro, and Smith, 91.5 per cent were visible by the sigmoidoscope. In our series 55.3 per cent of the polyps seen were on the anterior wall.

In this series of 29 patients, 7 or 24.1 per cent had multiple adenomas. In the series reviewed by Ault, Castro, and Smith, 19.3 per cent had two or more adenomas, and one of these had eight. The greatest number of polyps found in a single individual in our series was three.

#### *Incidence of malignant change*

The incidence of malignant changes varies widely in different reports. In our series it was 8 per cent. Ault, Castro, and Smith reported an incidence of 21 per cent, and Bacon and Broad<sup>(2)</sup>, 20.3 per cent.

#### *Signs and Symptoms*

*Bleeding* is the most important sign<sup>(4,8)</sup>. The blood may be bright or dark red, and may appear in clots or as a wine colored discharge. Whenever there is a history of blood passed by rectum, one should immediately think of a tumor and not of hemorrhoids. The passage of blood from the rectum in children should always lead one to suspect the presence of an adenomatous polyp. In adults, bleeding from the rectum is due to hemorrhoids or to some pathologic condition of the anorectal region in more than 90 per cent of the cases; but one should never make this diagnosis until thorough proctosigmoidoscopy, together with a roentgen examination, when this is indicated, has been done. Making a diagnosis of hemorrhoids without a proper examination results in more fatalities than any other error committed in dealing with lesions of the rectum and sigmoid.

*Mucous discharge*: On arising, the patient may have a seepage or explosive discharge of mucus, with or without blood, and with or independent of a bowel movement. This history should always suggest a tumor of the bowel.

*Prolapse*: Polyps may protrude or simulate hemorrhoids. At times they may cause prolapse of the rectal mucous membrane or of the entire wall of the rectum. This occurs most frequently in children.

*Intussusception* is also particularly frequent in children, and should always cause one to think of a polyp.

*Obstruction* is usually incomplete unless associated with intussusception. At times the

polyp may become large enough to cause an incomplete obstruction itself.

*Cramping and lower abdominal pain*: Large polyps may cause cramping of the bowels, which will often help to locate a large lesion.

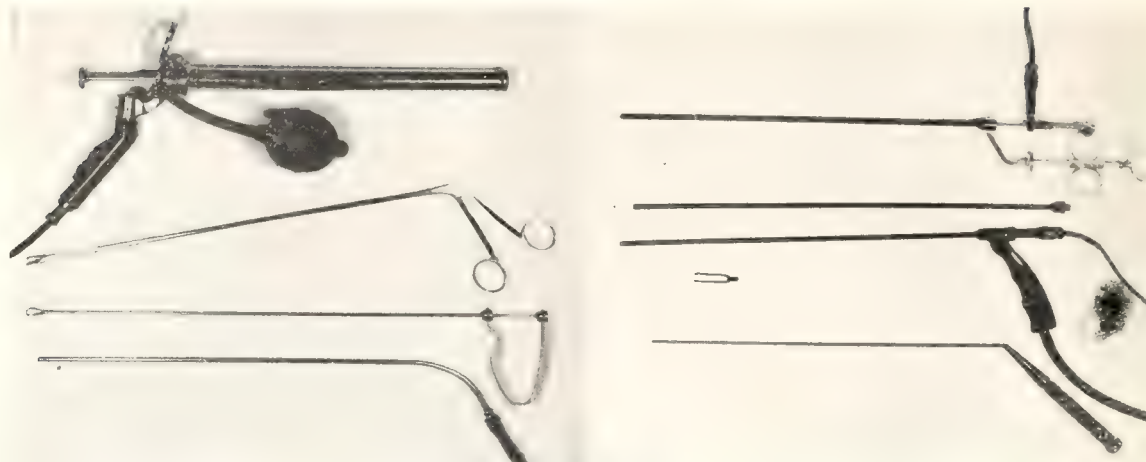
*Constipation or diarrhea*: Constipation and a sense of weight or pressure in the rectum may be present after the growth has attained considerable size. A large polyp may also produce irritation resulting in diarrhea.

*Tenesmus*: This is an expression of the patient's instinctive efforts to extrude a foreign body, the polyp, from the rectum.

*Asymptomatic group*: It cannot be stressed too strongly that polyps are often asymptomatic. Fifty-eight and six tenths per cent of the cases in this series were found upon routine proctosigmoidoscopy done in conjunction with a complete study of an asymptomatic patient, or before anal anorectal surgery was performed. In the series of Ault, Castro, and Smith, 203 cases out of 270 were diagnosed on routine proctosigmoidoscopy. In a series of 291 cases reported by Bacon and Broad<sup>(2)</sup>, 63 per cent of the patients offered no complaint referable to the benign growths which were found on routine examination.

It is amazing how seldom proctosigmoidoscopic examination is performed. In Watts Hospital during 1949, 1247 barium enema examinations, 3471 roentgen studies of the stomach, and 888 cystoscopies were carried out, but only 167 proctosigmoidoscopies were recorded. Barium enema examinations do not take the place of proctosigmoidoscopies, and *vice versa*. No study of the large bowel is complete without both procedures. One is an adjunct to the other, and where one is indicated it is likely that both will be.

In recent years there has been a great deal of publicity concerning the early detection and treatment of cancer. We even have traveling laboratories for roentgen studies of the stomach. Little or no emphasis, however, has been put upon proctosigmoidoscopic examinations, although this procedure is a more practical one. More than 50 per cent of the malignancies of the gastrointestinal tract are found in the large bowel and rectum, and more than 76 per cent of these are within reach of a sigmoidoscope. When the premalignant lesions which we are discussing are added to this figure, the extreme importance of proctosigmoidoscopic examinations is immediately apparent.



Figures 1 and 2

### Diagnosis

The routine methods of diagnosis—digital examination, proctosigmoidoscopy, and roentgen study—suffice in practically all cases. When one polyp is found, the entire large bowel and rectum should be thoroughly studied for additional ones. Adenomas of the rectum are to be distinguished from hypertrophied papillae, internal hemorrhoids, villous papillomas, mucous prolapse, procidentia, and carcinoma.

### Treatment

There is only one treatment—removal. As was stated previously, the discovery of one adenoma calls for roentgen examination of the entire colon to rule out the presence of additional lesions. Since all adenomatous polyps are considered pre-malignant, it is imperative that they be removed; this point cannot be too strongly emphasized. We hear and read a good deal about the diagnosis and treatment of cancer of the large bowel and rectum. The finest and most satisfactory treatment of cancer of the colon and rectum, however, is the diagnosis and adequate removal of adenomatous polyps. It is chiefly by this means that we can lower the death rate from cancer of the colon and rectum.

#### Removal through the sigmoidoscope

Eighty to ninety per cent of intestinal polyps are visible through the proctosigmoidoscope, and most of these can be removed through the 'scope if proper instruments are available. Figures 1 and 2 illustrate the instruments which we think are necessary. Figure 1 shows a proctosigmoidoscope, a biopsy forceps, and a suction tube, of which there are several varieties. Next to the bot-

tom is a forceps usually used as a cotton carrier, but often valuable in manipulating a polyp for complete examination and for removal by the electric snare.

Figure 2 shows the electric snare, and just beneath it an electrode which is useful for removing biopsy specimens and coagulating bases. It carries various tips, several of which are shown. It is hollow and has holes at the distal end, so that smoke may be aspirated during coagulation. Third is a most valuable instrument for controlling a bleeding point, as blood and smoke can be aspirated at the same time coagulation is being done. The second and third instruments are carried by the same handle. The one at the bottom is not necessary, but is very handy at times. It may be divided in the middle and used as a 6 inch electrode, it has a good angle at the handle, and also carries various tips.

There are three methods of removing polyps through the sigmoidoscope (table 2). The first is complete destruction by electrocoagulation. The second is removal by biopsy forceps, followed by electrocoagulation of the base. This method is much preferred to the first, because it permits a microscopic study of the lesion after removal. The third method—division of the pedicle by the diathermy snare and electrocoagulation of the base—is the most desirable when it can be used.

Table 2  
Methods Used for Removal of Polyps  
Through the Proctosigmoidoscope

Method	No. Cases
Electrocoagulation .....	1
Biopsy excision .....	6
Electric snare .....	18
Total .....	25





Figure 3

With an adenoma above the peritoneal reflection, especially on the anterior wall, extreme caution must be used. Vigorous traction or manipulation at the base of the pedicle may result in a tear or slough, with perforation through the peritoneal coat. When a polyp of the sigmoid is large enough to fill the 'scope and when the entire lesion, including the base, cannot be adequately visualized, it is best to approach it through the abdomen.

Figure 3 shows a specimen removed from a patient who consulted a physician because of rectal bleeding, and was told that the bleeding was coming from hemorrhoids, which he had. Nine months later we examined him through the sigmoidoscope and found a lesion of the sigmoid. A biopsy was reported as showing a benign lesion. Following this report we attempted to remove the growth through the sigmoidoscope. After removing some of it, however, we felt that it was too extensive, and decided upon an ab-

dominal approach. Since the tissues removed through the 'scope showed questionable malignant changes, a resection of the sigmoid and part of the descending colon was carried out seven days later. Figure 3 also shows the excellent healing that follows removal by electrocoagulation. In addition to the large lesion, this patient had two smaller benign polyps which no doubt were transplants. A diverticulum was also present.

A polyp seen in the upper rectum may actually arise much higher—that is, in the pelvic colon. The formation of a long pedicle, or the presence of intussusception may cause it to descend into the rectum. Figure 4 shows a specimen with a very long pedicle removed from the upper portion of the sigmoid. This patient was first seen complaining of rectal bleeding and pain and cramps in the left lower part of the abdomen. A clinical diagnosis of a polyp of the descending colon or sigmoid was made. Proctosigmoidoscopy and roentgen studies failed to show any lesion.

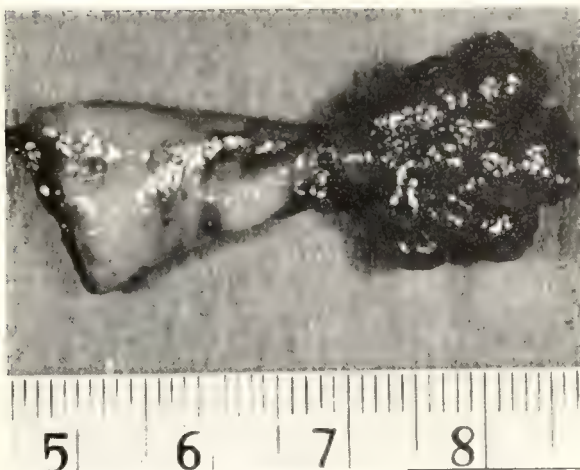


Figure 4

Her symptoms continued, and two months later she was re-examined. Roentgen studies were again negative, and at first no lesion could be seen through the sigmoidoscope. Just as we started to remove the 'scope, however, she strained, and the polyp suddenly filled the end of the 'scope and was easily pulled down into the rectum.

The 10 to 20 per cent of colonic and rectal polyps that cannot be removed through a sigmoidoscope can be excised by one of three methods (table 3).

Table 3  
Other Methods of Treatment

Method	No. Cases
Surgical excision .....	0
Transcolonic excision .....	2
Segmental resection .....	2
Total .....	4

1. Large accessible ones may be excised through the anus, and the base treated by electrocoagulation depending upon the individual lesion. In our opinion, those adenomas below the peritoneal reflection which show malignant changes, with involvement of the bowel wall, are best handled by abdominoperineal resection. This procedure has the lowest morbidity and mortality, and gives the best chance of permanent cure. A permanent low midline colostomy is of little inconvenience if properly managed—that is, with irrigations every forty-eight hours, well designed and fitted belts, and *no colostomy bags*. The patients we have do not seem to mind them at all.

2. Transcolonic excision is the method of choice for those polyps located proximal to the rectosigmoid and not accessible through

the 'scope. An incision made vertically through the longitudinal band gives adequate exposure. A sterile sigmoidoscope may be inserted above and below to determine whether additional lesions are present. A frozen section should be made, and if it is reported malignant, adequate segmental resection should be carried out.

3. Segmental resection is indicated for large sessile lesions and in cases where microscopy shows malignant involvement of the pedicle.

#### *The avoidance of complications*

We feel that all these patients should be given antibiotics prior to removal of the growths, and for several days afterwards. Since instituting this procedure we have had no complications, but prior to the routine use of antibiotics we had 2 patients who hemorrhaged seven and ten days respectively after removal. One of these had to return to the hospital for electrocoagulation of the bleeding point. In the other case, the bleeding stopped spontaneously. Removal of polyps should always be done in the hospital, and since we are dealing with premalignant lesions all patients return for examination every six to eight months as long as they live.

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#### *Abstract of Discussion*

Dr. C. S. Drummond (Winston-Salem): Cancer of the rectum and colon is more amenable to treatment than cancer in any other portion of the body except, perhaps, the skin. Successful treatment, however, depends upon early diagnosis of lesions that have already become cancerous, and especially the early diagnosis and removal of the precancerous lesions. The precancerous nature of these rectal and sigmoidal adenomas has been fairly well understood for several years and is being brought to our attention more and more.

When examined microscopically these adenomas



are found to consist of a central mass of adenoid tissue covered with the normal columnar epithelium of the bowel wall. They are not simple outgrowths of the normal mucous membrane. Lockhart-Mummery says that "A careful microscopic examination shows that they originate beneath the mucous membrane, probably in the solitary follicles, and as they protrude into the bowel become covered and surrounded by the mucous membrane."

The first physical sign of malignancy in these lesions is fixation, ulceration or both. It is impossible to predict when such changes will take place, or, if they are present, to tell when they began.

Dr. Harris' youngest patient was 3 years old; I have seen a single polyp in a child 2 years of age. As Dr. Harris has emphasized, a large percentage of these adenomas are asymptomatic. Only by more complete examination can we recognize and treat such lesions before they become malignant.

Four instruments are necessary for a complete rectal examination; the forefinger of either hand, the anoscope, the sigmoidoscope, and an x-ray machine. The first of these instruments every doctor has. We must remember, however, that there is more to doing a digital examination of the rectum than merely inserting the finger into the ampulla of the rectum through the anus. One should palpate the rectum as far as the tip of his finger can reach, and feel the entire surface of the bowel. This procedure should be followed with the anoscopic and sigmoidoscopic examination, and with x-ray studies when these are indicated. The importance of these first three instruments cannot be overemphasized, since statistics show that about 75 per cent of all adenomas as well as cancers of the bowel can be seen through a 10 inch sigmoidoscope. Roentgenograms are a valuable adjunct to the other methods of examination, and we have to rely on them when the lesion is beyond the reach of the sigmoidoscope.

As Dr. Harris has said, there is but one treatment—removal. Since these lesions are considered premalignant by those who know, they should never be allowed to remain, regardless of how innocent they may appear. A physician who makes a diagnosis of a polyp of the large bowel and does not remove it, or see that it is removed, has committed a grievous sin against his patient.

It cannot be overemphasized that extreme caution must be used in removing growths above the peritoneal reflection; they must be well visualized and preferably of the pedunculated type. If the polyp is of considerable size or sessile, and if the patient has been properly prepared preoperatively, it is much safer to remove it through the abdominal approach. Removal of a large growth from the ampulla of the rectum by the rectal approach sometimes becomes very difficult, particularly if the growth is sessile. A deep biopsy specimen should be obtained from near the center of this type of growth before any attempt is made at its removal; specimens removed from the edges may be misleading.

I agree with Dr. Harris that all of these patients should be in the hospital and should be given antibiotics for several days before and after the operation. It is never safe to attempt removal of these growths as an office procedure.

Dr. Harris is to be commended for his presentation of this important subject, and I want to thank him for the privilege of discussing.

Dr. Gordon Sinclair (Raleigh): It seems hardly necessary to stress the importance of proctosigmoidoscopic examination; yet in the last three years I have removed four carcinomas of the rectum from patients who had had hemorrhoidectomies just a few months earlier. That is nobody's fault but ours.

No patient should have a hemorrhoidectomy until he has been examined properly by proctosigmoidoscopy.

If these adenomas show early, low-grade malignant changes, and if they can be well fulgurated, it is not necessary to perform radical surgery. These lesions can be cured by fulguration, but the patient should be followed by re-examination every few months.

## MESENTERIC CYSTS

WILLIAM H. FREEMAN, M.D.

DURHAM

Mesenteric cysts, although rare enough to be regarded as surgical curiosities, were reported as early as 1507 by Beneviene. A small number of cases were reported by other writers before Rokitsansky gave his classic description of a chylous cyst in 1842<sup>(1)</sup>. Clinically, much of the interest in these cysts has centered in the varied symptomatology which they produce; academically, the etiology and classification have long been controversial topics. It is hoped that the report of five additional cases will contribute statistically to the study of this rare and interesting condition.

The low incidence of mesenteric cysts is shown in the following figures, which have been reported by various authors<sup>(2)</sup>:

Period	Hospital	No. Cases
1900-1926	Massachusetts General	6
1906-1938	University of California	1 in 93,511 admissions
1930-1938	Los Angeles General	1 in 188,921 admissions
1929	Mayo Clinic	8 in 820,000 admissions

Five cysts of the mesentery were seen on the surgical service at Watts Hospital in approximately 89,000 admissions between 1938 and 1949. Summaries of these cases follow.

### Case 1

A two year old boy was admitted to the hospital with a history of cramping abdominal pain in both lower quadrants for twenty-four hours. He had started vomiting twelve hours before admission, and had had two loose, brown stools. On admission the pain had become stabbing in character, and was localized in the mid-abdomen. The past history revealed that three months previously he had had a similar attack which lasted thirty-six hours and subsided. The family history and the past history were negative.

The physical examination was negative except for the abdominal findings. There was generalized tenderness and some muscle spasm. The abdomen was slightly distended and tympanitic to percussion. The peristalsis was diminished. The white

blood cell count was 12,200, with 82 per cent polymorphonuclear cells. The urine examination was negative.

The preoperative diagnosis was ruptured appendix with peritonitis. At operation a large multilocular cyst of the ileal mesentery, containing bloody fluid and closely connected to the bowel wall, was found.

Because of the child's poor general condition, the cyst was marsupialized. The pathologic diagnosis was lymphatic cyst of the mesentery, with hemorrhage.

The postoperative course was uneventful, and the patient was discharged fourteen days later.

### Case 2

A 67 year old white man was admitted with a history of heartburn and indigestion for about five years. The distress was usually relieved by Tums and sodium bicarbonate. For eight weeks prior to admission he had had nausea and vomiting, which gradually became worse. He was placed on a liquid diet, but continued to vomit. There was a weight loss of 30 pounds during this time. No history of melena, hematemesis or jaundice was reported. He had noted in the upper abdomen occasional cramping pains which did not radiate.

The physical examination was negative except for the abdominal findings. There were dilated veins on the abdominal wall. Some fullness in the epigastric region was noted, and a grapefruit sized mass was felt after a gastric lavage was performed.

Roentgenograms revealed a deformity of the stomach.

An exploratory laparotomy disclosed a large, firm mass in the lesser omental cavity and smaller firm nodules scattered throughout the peritoneal cavity. A small cyst, measuring 5 cm. in diameter and containing serous fluid, was removed from the mesentery of the ileum.

The pathologic diagnosis was neurogenic sarcoma and a lymphatic cyst of the mesentery. The postoperative course was uneventful.

### Case 3

A 41 year old white female was admitted on October 31, 1947. The past history revealed that seven years previously she had had an obstructing lesion of the sigmoid colon, which was diagnosed as tuberculosis. A colostomy was performed at this time. About three years later the fecal current was reestablished, and she got along very well except for a troublesome sinus which drained some fecal material. Two years prior to admission an incisional hernia developed, causing some discomfort.

The physical examination revealed a moderately obese female with an incisional hernia in the old left rectus incision. There was a small sinus opening. Otherwise, the examination was negative.

On November 11, 1947, the sinus tract was excised and an exploration was carried out. A small rounded cyst, measuring 9 cm. in diameter, was found in the mesentery of the sigmoid colon. The cyst was enucleated with ease, and the incisional hernia was repaired.

The wound healed by first intention and the postoperative course was uneventful.

### Case 4

On April 29, 1949, a 66 year old female was admitted with a chief complaint of abdominal pain of forty-eight hours' duration. Past history revealed that she had had a gastric hemorrhage from a benign ulcer in May, 1943. Seventy-two hours before admission she had fallen across a chair and injured her abdomen. Twenty-four hours later she was

awakened from sleep by a sudden onset of generalized abdominal pain. The pain was located in the upper abdomen, and was cramping in character. Six hours later she had a normal bowel movement. The pain persisted, however, and later in the day she took a laxative, which was followed by one watery stool. Nausea persisted from the onset of the attack, and she vomited on four occasions. There were no genitourinary symptoms, and no history of melena or recent weight loss.

The physical examination revealed a frail woman, who appeared acutely ill. The positive findings were limited to the abdomen, which was slightly distended and showed marked muscle spasm. Two sausage shaped masses were palpated in the upper and mid-abdomen respectively. She was markedly tender over these masses.

An exploratory laparotomy, carried out two hours later, disclosed two large cystic structures arising from the small bowel mesentery. The larger cyst was twisted, and contained approximately 1,000 cc. of sanguineous fluid. The smaller cyst contained about 500 cc. of sanguineous fluid, and there was free bloody fluid in the peritoneal cavity. Both cysts were enucleated with ease.

The pathologic diagnosis was a lymphatic cyst of the mesentery, with hemorrhage. The postoperative course was uneventful, and the patient was discharged from the hospital on June 4, 1949.

### Case 5

A 60 year old white female was admitted on May 13, 1948, with a chief complaint of "gas pains" for three days. She had been constipated for the past three months, with some decrease in stool caliber. No feces or flatus had been passed on the day of admission. There had been occasional nausea, but no vomiting, and no gastrointestinal bleeding.

The physical examination yielded no positive findings beyond the abdomen, which was found to be slightly distended and tender, with some voluntary muscle guarding. No organs or masses were palpable.

An upright film showed dilated loops of small intestine, with fluid level suggestive of intestinal obstruction.

On May 14, 1948, an exploratory laparotomy was performed. A large cystic structure measuring 9 cm. in diameter was removed from the mesentery of the ileum, and was found to contain a whitish, pasty material. The pathologic diagnosis was lymphatic cyst of the mesentery.

The postoperative course was uneventful, and the patient was discharged on May 21, 1948.

### Comment

All the cysts in this series were of the lymphatic type. Three of the patients were over 60 years of age, one was 41 years old, and one was a 2 year old child. In no case was the diagnosis made preoperatively. Acute symptoms were present in 3 of the cases, 2 of which were diagnosed as intestinal obstruction, and one as acute appendicitis with perforation. One case was complicated by torsion; 2 others were producing some degree of intestinal obstruction. Two of the cysts were found at operations for other conditions. One cyst was in the mesentery of the sigmoid colon; the other four were located in the ileal mesentery.



Enulceation was carried out in all cases except that of the child. In this case the cyst was so adherent to the ileum that marsupialization was performed. The patient's general condition did not warrant a resection of the cyst and adjacent bowel.

The postoperative course of all the patients was uneventful.

### *Classification*

Mesenteric cysts were first classified by Braquehay<sup>(3)</sup> in 1892. Moynihan<sup>(4)</sup>, in 1897, presented a classification based on the cystic contents. In 1900 Dowd<sup>(5)</sup> stressed the embryologic origin of these tumors and classified them as follows:

1. Embryonic cysts
  - (a) Dermoid; (b) serous; (c) chylous; (d) hemorrhage; (e) enteric
2. Hydatid cysts
3. Malignant cystic disease

Many writers have presented satisfactory modifications of Dowd's classification. Before one accepts any classification, however, the definition must be clarified. Peterson<sup>(6)</sup> stated that true mesenteric cysts are not malignant, parasitic or tuberculous; therefore, he separated all mesenteric cysts into two groups and presented the following classification<sup>(6)</sup>:

- I Embryonic
  - (a) Cysts arising from embryonic remnants and sequestered tissue
    - (1) Serous; (2) chylous; (3) sanguineous; and (4) dermoids
  - (b) Cysts of intestinal origin
    - (1) By sequestration from the bowel during development
    - (2) From Meckel's diverticulum, when it arises from the concave side of the bowel, or acquires an intramesenteric position
  - (c) Cysts arising from the urogenital organs
- II Pseudocysts
  - (1) Of infective origin; hydatids, and cystic degeneration of tuberculous nodes
  - (2) Cystic malignant disease

### *Incidence and Pathology*

Mesenteric cysts occur in all age groups. The cysts may be single or multiple, unilocular or multilocular. They vary in size from 1 centimeter to one that fills the entire abdominal cavity. They may occur in any portion of the mesentery. Jackman and Mayston<sup>(7)</sup> report that 70 per cent are found in the small bowel mesentery, and 25 per cent of these in the ileal mesentery. All except one case in this series of 5 cases originated in the small bowel mesentery. The contents of the cysts may be chylous, serous, or bloody.

Cysts of nephrogenic origin are the rarest of all mesenteric cysts. These are usually

large, and involve the mesentery and adjacent structures. They are filled with a brownish serous fluid containing pseudomucin<sup>(8)</sup>. Dowd<sup>(5)</sup> suggested the close relationship of the wolffian body and genital ridge to the mesentery in fetal life, thus supporting the theory that these cysts may be derived from misplaced remnants of the wolffian body.

Enteric cysts comprise an interesting group which are usually found in the lower end of the ileum. They may be closely connected with a Meckel's diverticulum, the navel, and misplaced portions of the intestine. They vary in size, and contain yellowish, colorless, or brownish mucinous material. Microscopically, the cyst wall resembles the wall of intestine, containing mucosa, smooth muscle and lymphoid tissue, and a lining of cuboidal or stratified epithelium. Cysts that are connected with the navel are known as omphalomesenteric cysts.

Dermoid cysts are also quite rare. They vary in size and location, and usually contain elements of the entoderm, mesoderm, and ectoderm.

Sanguineous cysts are so designated because of the bloody contents, usually due to extravasation or trauma.

Serous cysts vary in size, and contain clear fluid. The walls of these cysts resemble the walls of the lymphatic type. However, they usually contain smooth muscle fibers, suggesting a possible enteric origin.

Lymphatic cysts are the most common type of mesenteric cysts. All the cases in the present series fall into this category. These cysts may be unilocular or multilocular, and usually contain clear fluid, chylous material, and occasionally blood.

Microscopically, the walls are composed of fibrous tissue, containing round cells or lymph follicles. The cells lining the cyst are usually of the endothelial type. Occasionally, giant cells are seen around fatty detritus.

### *Etiology*

The pathogenesis of mesenteric cysts remains controversial. Of the many theories that have been proposed, none completely explains the origin. Stasis of the lymphatic ducts, a theory that has been advocated by many writers, is excluded because of the relatively limited involvement. The abundant anastomosis between the mesenteric lymphatic passages is evidence against the theory of a simple obstruction. Degeneration of

lymph nodes, trauma, and inflammatory changes have all been considered as possible etiologic agents.

Some writers feel that these cysts are true angiomas. Dowd<sup>(5)</sup> pointed out the possibility of an embryologic origin. He felt that early in fetal life a sequestration of cells from the wolffian body may become displaced and give origin to nephrogenic cysts. He also suggested that such a sequestration of cells from the intestinal tract might produce cysts which appear to be intestinal in origin.

### Diagnosis

Preoperative diagnosis of a mesenteric cyst is the exception rather than the rule. None of the cases in this series was diagnosed before operation. Parsons<sup>(1)</sup> was able to find only four cases in the literature which were diagnosed preoperatively. The larger cysts are occasionally diagnosed; the smaller ones are usually found incidental to some other procedure. The diagnosis is ordinarily made by exclusion. Although roentgenograms of the abdomen may be of some value, they are not conclusive.

A history of abdominal pain which does not localize is fairly characteristic of these cases. Usually there are recurrent episodes over a number of years. Nausea and vomiting are usually present, and pressure on the intestinal lumen may result in disturbances of bowel function.

A smooth, rounded, elastic mass that is freely movable is suggestive of a mesenteric cyst. A flat percussion note may be heard over the site. Occasionally an omental cyst presents the same characteristics, and differentiation is difficult. In the uncomplicated case, the temperature, pulse, and blood findings are normal. Hemorrhage into or rupture of the cyst may produce abdominal tenderness and rigidity.

Other possible complications are torsion of the cyst, intestinal obstruction (which may or may not produce peritonitis), and pressure upon the pelvic organs. The patient is usually seen after one of the above complications has developed. At operation the real cause of the acute symptoms is found.

Other conditions which are suspected with the onset of acute symptoms caused by mesenteric cyst are acute appendicitis, intestinal obstruction, acute diverticulitis, and other types of abdominal tumors.

### Treatment

The treatment of mesenteric cysts is entirely operative, and may be classified as follows:

1. *Enucleation*: This is the procedure of choice in all cases where it is practicable, since the mortality rate is very low. Enucleation was done in 4 of the cases in this series, without a mortality.

2. *Enucleation, with resection of bowel*: This procedure is performed (1) when removal of the cyst cannot be accomplished without danger to the mesenteric vessels, or (2) when marsupialization has failed to relieve the patient. Obviously, the mortality rate is higher because of the greater surgical trauma. Some writers report a mortality rate as high as 40 per cent. Resection was not necessary in any of the cases in this series.

3. *Marsupialization*: Some surgeons look upon this procedure as obsolete. It is the procedure of choice in cases which cannot be enucleated and in which enucleation, with resection of the bowel, may be dangerous. There are theoretical dangers—namely, infection, intestinal obstruction and peritonitis—but these are relatively uncommon. The procedure is relatively safe, and the results are surprisingly good. Marsupialization was done in one case in our series because of the attendant dangers of an immediate resection.

4. *Aspiration*: This procedure is obsolete and is usually followed by recurrence. It has no place in the armamentarium of the present day surgeon.

### Summary

1. Five cases of mesenteric cysts are presented, with a brief resume of the symptoms, physical findings, examinations, and operative findings.

2. The classification of mesenteric cysts is discussed briefly.

3. A summary of possible etiologic factors is presented.

4. The symptomatology and physical findings are reviewed, with emphasis on the likely complications.

5. The treatment of this unusual condition is discussed.

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## HORSESHOE KIDNEY

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and

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WINSTON-SALEM

The congenital anomaly of median fusion of the kidneys has recently been brought to our attention anew by the appearance of 3 such cases at this clinic. Two patients showed evidences of obstruction, with pain and infection. In the third case a tuberculous infection was present in one kidney. All 3 patients were relieved by operation. These cases re-emphasize the necessity for considering this condition in all patients with bizarre symptoms related to the upper urinary tract.

### *Incidence and Pathology*

Reports on the incidence of the condition in large series of autopsies vary from 1 in 500 to 1 in approximately 1000 cases<sup>(1)</sup>. In 90 per cent of the cases fusion is of the lower poles<sup>(2)</sup>. The long axis of each kidney points medially and anteriorly, while the calices are directed medially. Reduplication of the pelvis may occur on either or both sides. The pelvis is usually anterior to the isthmus, while the ureter courses ventral to the isthmus. The two kidneys are usually asymmetrical with regard to size, proximity to the vertebral column, and level in the body.

The condition may vary in degree from complete fusion along the entire surface of both kidneys—"cake kidney"—to a thin isthmus of fibrous tissue containing no actual renal parenchyma. "Cake" kidneys most often lie within the bony pelvis. The isthmus usually lies on a level with the third interspace, and in rare instances has been known to lie behind the aorta and vena cava. Accessory vessels and bizarre renal veins and

arteries are the rule rather than the exception, and present possible causes of obstruction to the urinary flow.

The horseshoe kidney may be expected to be the site of many pathologic changes, chiefly those secondary to obstruction. In order of frequency, the pathologic conditions most often encountered are: stone formation, hydronephrosis and pyonephrosis, tuberculosis, neoplasms, ureterolithiasis, injury, acute infections, ureteral stricture, and perinephritic abscess<sup>(1a)</sup>.

### *Symptoms*

Patients with this anomaly sometimes exhibit interesting and unusual clinical pictures. Symptoms may be divided into two classes: (1) those which make up the "Rovsing syndrome"<sup>(1a)</sup> and (2) related symptoms. The Rovsing syndrome is characterized, not by typical renal pain, but by generalized upper abdominal distress, related to a change in posture from the lying to a sitting or standing position. The patient may obtain relief by walking or by leaning forward to take tension off the isthmus and concurrently to relieve pressure upon abdominal nerves and vessels. The pain may be accentuated by eating, by lifting, or by any strain.

Other symptoms are usually related to some pathologic condition—often secondary to the anomaly—such as stone formation, stricture, and infection. Such symptoms are those ordinarily associated with these conditions in patients whose kidneys are otherwise normal.

### *Diagnosis*

The diagnosis is usually made by roentgen examination. Before the development of modern investigative aids, however, several cases were diagnosed by palpation of the isthmus. The typical roentgen picture is that of malrotation of the kidneys with the calices often pointing anteriorly or even medially, and with the lower poles pointing medially and anteriorly.

### *Treatment*

Treatment is determined by the condition found on exploration of the kidney. Patients with the Rovsing syndrome, who have no other pathologic conditions such as stones or hydronephrosis, may be expected to improve following symphysiotomy. Even when other conditions are encountered, symphysiotomy should be performed routinely, in addition to any other procedures which are indicated. Preoperatively, the patient should be given

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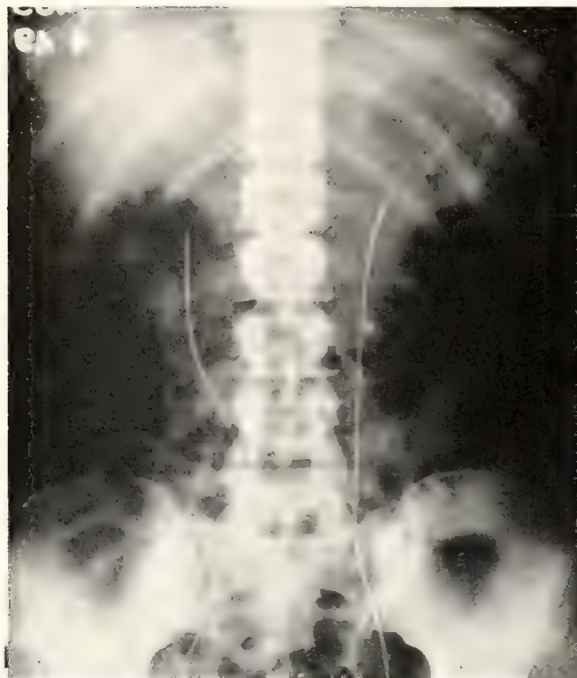


Fig. 1 (Case 1). Plain film of the abdomen with catheters inserted. Note the stone in the lower calyx of the left kidney.



Fig. 2 (Case 1). Preoperative retrograde pyelogram.

the benefit of thorough pyelographic studies, insofar as possible. The presence of other pathologic conditions may necessitate a primary heminephrectomy, and of course this operation should not be done until full information has been obtained.

### Case Reports

The following cases seen in our clinic each presented different indications for operation.

#### Case 1

A 39 year old Indian woman had had low back pain for sixteen years. Thirteen months before her admission to the hospital she began to have burning on urination and an occasional episode of sharp pain in the right flank, radiating toward the pubis. At the same time she noticed nocturia and urgency. There was no history of hematuria, stones, or weight loss, and her general health had been good.

On physical examination the blood pressure was found to be 110 systolic, 68 diastolic. The heart and lungs were normal. A slightly tender mass, 10 by 10 cm. in size, was palpable in the right upper quadrant, and there was slight tenderness in the right flank. The left kidney was not palpable, and pelvic examination was negative.

The blood picture was normal, and Wassermann and Kahn tests were negative. The blood nonprotein nitrogen was 30 mg. and the blood phosphorus 4.1 mg. per 100 cc. The urine had a pH of 6.5, a specific gravity of 1.014, and no albumin, sugar, or casts; it contained 4 to 10 white blood cells per high power field. Cultures made at the time of retrograde pyelography showed *Alkaligenes fecalis* in the urine obtained from both the right and the

left kidneys. A phenolsulfonphthalein excretion test showed 63 per cent of the dye excreted in two hours. There was a definite left hydronephrosis, and the findings were typical of "horseshoe kidney." A retrograde pyelogram confirmed this diagnosis. A stone was seen in the lower calyx of the left kidney (figs. 1 and 2).

Although this patient's pain was entirely on the right side, it was thought that division of the isthmus, removal of the calculus, and correction of the obstruction on the left side might relieve her symptoms. At operation the condition shown in figure 3 was found. In addition to the stone in the lower calyx, which was obviously the result of poor drainage, there was caliceal hydronephrosis of the left lower calyx, partially involving the isthmus; hydronephrosis of the left pelvis, caused by the large vessels which coursed across it, as shown in the sketch; and an aberrant vessel running to the lower pole on the left. The following procedures were done: (1) symphysiotomy, (2) division of the aberrant vessel, with heminephrectomy of the lower third of the left kidney, (3) nephrolithotomy, (4) nephrostomy, and (5) nephropexy, which involved rotating and elevating the kidney (fig. 4).

The patient had an entirely uneventful postoperative course. The nephrostomy tube was removed on the seventh postoperative day, and the patient was discharged on the eleventh day. Her pain was completely relieved before she left the hospital, and during the six months she has been followed. A persistent urinary tract infection has been apparently cleared with Chloromycetin. Figure 5 shows an intravenous pyelogram made three months after operation.

#### Case 2

A 28 year old white woman had had an intermittent dull, aching pain on her left side since early childhood. During the past two years the episodes had become more frequent, and were associated with "swelling" of the left side of the abdomen.



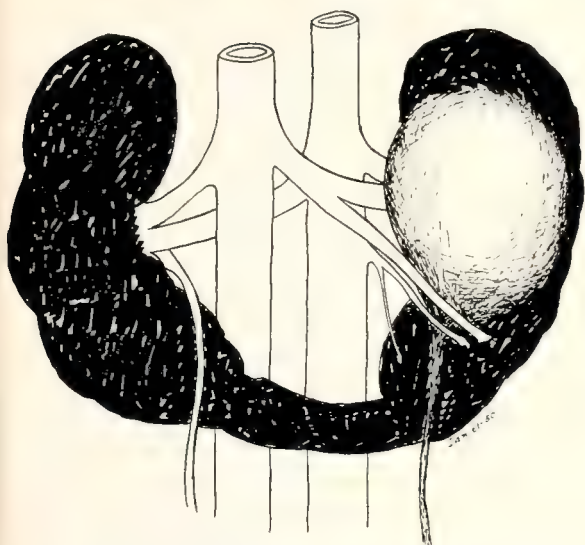


Fig. 3 (Case 1). Diagrammatic representation of the condition existing at the time of operation.

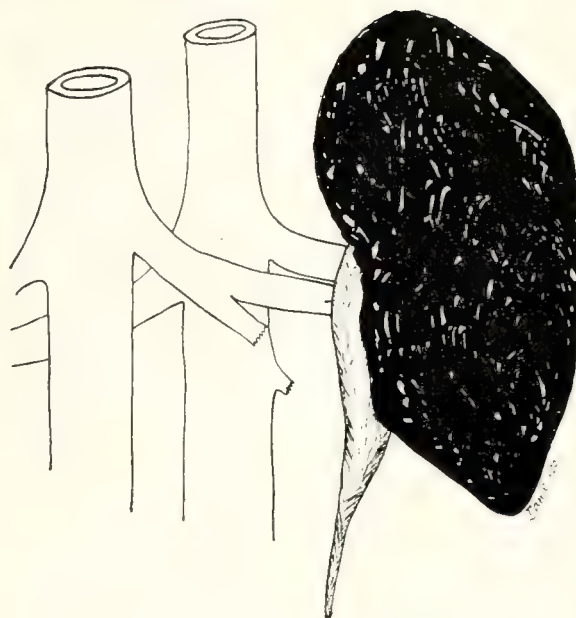


Fig. 4 (Case 1). Diagrammatic representation of the postoperative condition.



Fig. 5 (Case 1). Intravenous pyelogram made two months after operation, showing excellent function, good position of the kidney, correction of malrotation, and relief of hydronephrosis.



Fig. 6 (Case 2). Preoperative retrograde pyelogram, showing marked left hydronephrosis.

Pyuria, marked urinary frequency, and some dysuria had developed recently. There was no history of lithuria, hematuria, or trauma.

On physical examination the blood pressure was found to be 128 systolic, 78 diastolic. The heart and lungs were normal. A tender fluctuant, poorly

outlined mass, approximately 10 by 15 cm. in size, was palpated in the region of the left kidney. Pressure on the mass produced marked urgency. There was pronounced tenderness in the left flank.

Blood examination was within normal limits. The nonprotein nitrogen on admission was 32 mg. per 100 cc. The urine was slightly acid, with a specific gravity of 1.010, and no sugar or casts; it was

loaded with white cells, however. Cultures of the urine were initially sterile, but later showed *Aerobacter aerogenes*. A phenolsulfonphthalein excretion test showed 65 per cent excretion of the dye in two hours.

Retrograde pyelography showed a marked left hydronephrosis in a "horseshoe" kidney (fig. 6). At operation a very large artery and vein were seen to course across the pelvis of the left kidney anteriorly, definitely constricting the pelvis and obstructing its drainage. The hydronephrosis had produced definite dilatation of the calices, and the cortex of the kidney was quite thin in all areas. The isthmus showed a definite line of demarcation between the hydronephrotic left kidney and the normal firm tissue of the right kidney. Because of the marked hydronephrosis and the resultant destruction of the left kidney, a symphysiotomy was performed and the left half of the "horseshoe" was removed.

During the six months that this patient has been followed, she has reported relief of the pain which she had had almost all her life. The urinary tract infection was successfully treated with Chloromycetin, and the symptoms of urgency and frequency have disappeared.

### Case 3

A 47 year old white man had had recurrent episodes of low back pain for many years, radiating through and around the left flank to the left lower quadrant. For the past two years nocturia had been associated with these episodes, but he had had no chills or fever. Recently some terminal dysuria had been present, and several weeks before admission he had noted a trace of terminal hematuria.

The past history revealed that the patient had had pleurisy in 1929, at which time he was bedridden for four months. He was then apparently well until 1940, when he began to have a productive cough, chronic fever, and general malaise. A tuberculous lesion was discovered in the apex of the left lung, and he was treated at a sanatorium for ten months. He received a phrenic nerve crush on the left. Since his discharge from the sanatorium he had had no further trouble.

Physical examination showed a blood pressure of 120 systolic, 70 diastolic. There was no lag in respiration, but slight dullness was noted at either apex posteriorly. No masses or abdominal organs were palpable, and no tenderness was noted. Blood studies showed a hemoglobin of 15 Gm., and 10,000 white blood cells, with a normal differential. The nonprotein nitrogen was 48 mg. per 100 cc. The urine was clear yellow, with a pH of 6.5, and a specific gravity of 1.008. Tests for albumin and sugar were negative. No casts were seen, but there was an occasional white blood cell.

Retrograde pyelography confirmed the diagnosis of horseshoe kidney, and showed blunting and fuzziness of the calices on the left side. Cystoscopic examination showed changes in the posterior wall of the bladder suggestive of tuberculous involvement. Specimens of urine obtained from the left kidney and bladder both showed acid-fast bacilli.

A left nephrectomy and a symphysiotomy of the isthmus connecting the lower poles were performed. Pathologic examination showed "chronic granulomatous pyelonephritis, with tubercle formation, in a horseshoe kidney."

The patient's wound healed well, and his immediate postoperative course was entirely satisfactory. When last seen on April 4, 1950, two years after the operation, he stated that he felt good, was working full time, and had gained 20 pounds in weight. Examination of the urine at this time showed only a rare white blood cell.

### Summary

1. The anomaly of horseshoe kidney has been discussed, with emphasis on its incidence, symptomatology, diagnosis, and treatment.

2. Three cases of this condition have been reported.

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## INFANTILE MENINGITIS DUE TO AN UNUSUAL AEROBIC SPORE-FORMING BACILLUS

### A Case Report

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AHOSKIE

FRED L. RIGHTS, Ph.D.  
CHAPEL HILL

and

W. EUGENE KEITER, M.D.  
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The case to be reported is noteworthy chiefly because it afforded an opportunity for competent bacteriologic study of an organism never before described and not known to be naturally pathogenic. We believe, however, that the case will interest the clinician as well as the bacteriologist.

### Case Report

On December 5, 1948, a 5 day old Negro male infant was presented for examination because of convulsions. He had been delivered at home by a midwife, following an uncomplicated full term pregnancy. The patient's neonatal course had been uneventful until the night before admission, when the first convulsion occurred. He had been breast fed, and the mother presented no sign of illness.

The family history was noncontributory. There had been no concomitant or recent illnesses among the siblings or parents.

Our first examination was entirely negative. The cord was sloughing from the umbilicus. The temperature was normal. While in the clinic the infant had a mild, generalized

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tonoclonic convulsion. Tetany of the newborn was suspected and 5 cc. of a 10 per cent solution of calcium gluconate was administered intravenously; the convulsion immediately ceased. Vitamin K and 1500 units of tetanus antitoxin were also given prophylactically. The child was retained at the clinic for further observation. In a few hours the convulsion recurred, and admission to the hospital was advised.

No positive physical findings were noted on admission, but lumbar puncture revealed a bright yellow, cloudy spinal fluid under no increased pressure. The cell count was 4,500 per cubic millimeters, with 95 per cent polymorphonuclears. Direct smear of the sediment revealed a number of small slender gram-negative rods. A tentative diagnosis of *Hemophilus influenzae* meningitis was made, and Streptomycin (0.1 Gm. every three hours) and sulfadiazine (0.25 Gm. every four hours) were prescribed.

On the following morning the infant's condition was worse; the fontanelle was bulging, the neck was stiff, and the temperature was 103.6 F. At this time examination of the cultured spinal fluid revealed a large gram-negative bacillus, with early spore formation. The appearance was peculiar in that the spore was subterminal, was not completely differentiated from the remainder of the organism, and was trailed by the greater portion of the body of the bacillus (fig. 1). The technician reported a superficial resemblance to spermatozoa.

We were sure now that this was not a case of meningitis caused by *H. influenzae*. Penicillin in doses of 20,000 units every three hours was added to the other medications. The infant's course was continually downhill, however, and he expired on the third hospital day.

#### Autopsy findings

Autopsy, performed six hours *post mortem*, revealed no abnormal findings except in the central nervous system. The brain was covered with a thick grayish exudate, and the base was almost liquefied. The umbilical cord had recently dropped off, leaving a clean stump. The umbilical vessels within the abdomen were patent and showed no signs of infection. All the organs were normal. Cultures of the heart blood, the liver, and the umbilical vessels were sterile. A culture of the brain revealed the same organism which

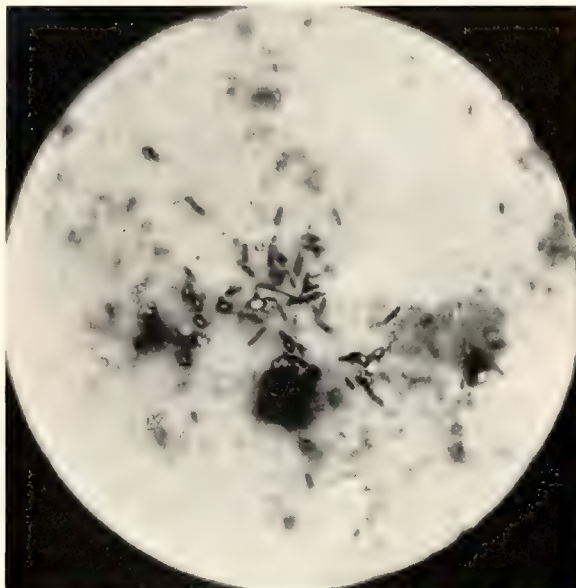


Fig. 1. Photomicrograph of a smear from the 24 hour culture of the organism, showing the bacillus, early spore formation, and spores.

had been obtained from the original lumbar puncture.

#### Bacteriologic Studies

The organism in question proved to be a large, gram-variable, spore-forming, aerobic bacillus which in young cultures appeared as pleomorphic gram-negative rods. The enlarged portion of the pleomorphic rod did not appear as a spore on first examination, since the spore walls were thick and stainable, and remained undifferentiated from the remainder of the organism. These large, swollen, subterminal ellipsoidal spores developed in forty-eight hours, and stained darker than the vegetative portion of the organism, which after eighteen hours became gram-negative. The spore-forming nature of this organism was further evidenced by its resistance to heat. When vials of suspension of the culture were immersed in a water bath at different temperatures, growth continued after two hours at 50 to 80 C. At 100 C. growth continued more than 15 minutes, but less than 30 minutes.

Young colonies on a dry, nutrient agar plate were large, white, flat, and translucent. After forty-eight to seventy-two hours the colonies became light tan in color, dull, opaque, raised, slightly rough, and tenaciously adherent to the agar surface. Growth in semi-solid agar or on the surface of media containing glucose revealed highly active

motile rods which swarmed across the surface. Appreciable amounts of ammonia were produced by growth on nutrient agar media after the cultures stood unopened for several days.

Dextrose and sucrose were fermented with the production of acid, but no gas. The organism failed to ferment lactose, xylose, and mannitol. The methyl red and Voges-Proskauer tests, indol production, and citrate utilization were negative. Starch was not hydrolyzed, and gelatin liquefied slowly.

Culturally and morphologically, therefore, this organism is presumably related to *Bacillus circulans*<sup>(1)</sup>, but certain features, especially its inability to hydrolyze starch, set it apart from *B. circulans* on a strictly taxonomic basis. It must be recognized, however, that members of the genus *Bacillus* frequently show variant characteristics which are sufficient to preclude the consideration of this organism as an entirely new species.

The organism under investigation was not pathogenic for mice by the usual routes of inoculation, but when injected intracerebrally it produced a transient and occasionally fatal meningitis. One out of every three mice so inoculated died in seven days, and the organism was recovered.

*In vitro* sensitivity studies revealed the following data on the organism's sensitivity to the therapeutic agents employed:

Sulfadiazine: resistant to 50 mg.  
Streptomycin: resistant to 20 mg.  
Penicillin: sensitive to 0.25 units.

#### Comment

This case is an excellent illustration of the fact that infantile meningitis presents no typical characteristic, or distinctive picture. Anyone with experience in treating the newborn realizes the futility of waiting for bulging of the fontanelle, stiff neck, convulsions, and fever to suggest the presence of meningitis in patients of this age. Anorexia, vomiting, fretfulness, and other minor complaints often signal the onset of severe infection in infancy. In all too many cases of infantile meningitis, the diagnosis is made at the autopsy table.

It is supposed that the umbilicus was the portal of entry in this instance, though no obvious sign of infection was noted about the umbilical vessels at the time of autopsy. We can only speculate as to the origin of the recovered organism.

As the *in vitro* studies showed, penicillin

was the drug of choice, and possibly could have effected recovery had it been administered very early in the course of the disease.

#### Summary

A case of meningitis in a 5 day old Negro male infant was found to be caused by an unusual aerobic spore-forming bacillus. A detailed report of the case with autopsy findings and a complete description of the bacteriologic study of the bacillus, has been presented.

*In vitro* sensitivity studies showed penicillin to be effective against this organism.

The authors wish to express their appreciation to Miss Mildred Ringle of Memorial General Hospital, Kinston, North Carolina, who originally isolated the organism, and to Miss Mary Coleman Henderson of Watts Hospital, Durham, North Carolina, for their continued interest and stimulation.

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## PROGRESSIVE LIPODYSTROPHY

### Report of Two Cases

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and

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Progressive lipodystrophy, a striking and rare condition, was first described by Weir Mitchell in 1885<sup>(1)</sup>. The syndrome is characterized by a gradual disappearance of the subcutaneous fat, usually limited to the upper half of the body, without concomitant loss of fat deposits elsewhere. The onset is insidious, and occurs between the ages of six and 12 years. Females are more frequently affected than males, the ratio being 2 to 1<sup>(2)</sup>. The dystrophy progresses slowly over a number of years, until the original fat deposits in the affected areas have completely disappeared.

Various types of this disease have been described. Igersheimer, in a recent article<sup>(3)</sup>, cited cases from the literature in which the involvement was limited either to the lower extremities, to all four extremities, to the face, or to universal distribution except for the face.

The etiology is unknown. The most plausible

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Fig. 1 (Case 1). Photograph of the patient at the age of 4 years, before the onset of the disease. Note normal facial contour.



Fig. 2 (Case 1). Patient at the age of 10 years, showing marked diminution of subcutaneous facial tissue.

ible explanation is that offered by Frank<sup>(4)</sup>, and Igersheimer<sup>(3)</sup>, who gave evidence that a poor or defective development of the mesenchyme is at fault, and reported examples of congenital and hereditary changes in the anlage of the mesenchyme.

Though lipodystrophy is rare, the reported incidence would probably be much higher if the condition were recognized more frequently. A careful search of the literature by Parmelee in 1948<sup>(2)</sup> disclosed a total of 95 cases. Because this syndrome is frequently not recognized, even by well trained physicians, and because the diagnosis can be made by physical examination alone, we feel that the publication of the following case reports is justified.

### Case Reports

#### Case 1

A ten year old white boy was admitted to the Pediatric Service of the North Carolina Baptist Hospital on August 13, 1946. His parents thought he looked "run down."

There was no history of similar conditions in the family. The past history was noncontributory except that at the age of 4 years the patient had had two attacks of unexplained gross hematuria, from which he recovered without residual changes. At the age of 5 years, his face showed a changing contour, becoming very thin and old-looking. At the age of 6 he was said to have sinusitis, which persisted to some degree until he was 10 years old.

The physical examination showed an alert, cooperative, well nourished and well developed boy whose only sign of abnormality was limited to the face. The skin of the face was sallow and showed

apparent loss of all subcutaneous fat. There was no pain or tenderness, and no abnormality of the muscle tissue was evident. The otorhinolaryngologist found no evidence of sinusitis. Laboratory studies showed the urinalysis and complete blood count to be well within normal limits. Serum cholesterol was 165 mg. per 100 cc., and the Kahn test was negative.

The hospital course was uneventful. A diagnosis of progressive lipodystrophy, confined to the face, was made and instructions for general supportive care were given the parents.

#### Case 2

An 8 year old white girl was brought to the Pediatric Service of the North Carolina Baptist Hospital on March 29, 1949, because "she was run down" and "had looked old all her life." The family history was noncontributory.

The past history showed that the mother had "had inflammation of the tubes during the entire pregnancy." The patient's physical development had been somewhat slow. She cut her first tooth at the age of 11 months, and did not walk alone until the age of 14 months. After beginning school, however, she made all A's. She had a questionable history of frequent episodes of pyuria since the age of 2 years.

The physical examination revealed a rather small and slightly underweight child, who was alert, cooperative, and intelligent. The loss of subcutaneous tissues in the face was striking, and the skin appeared sallow. On closer examination the neck, shoulders, upper extremities and thorax showed definite diminution, but not complete loss, of subcutaneous fat. The lower body appeared normal. There was bilateral blepharitis, and the tonsils were moderately enlarged and inflamed.

Laboratory studies showed a catheterized specimen of urine to be negative, and the urine cultures were sterile. The Fishberg concentration test was normal. The complete blood count was normal except for a 12 per cent eosinophilia, for which no cause was found. The serum cholesterol was 200 mg. per 100 cc., and the Kahn test was negative.

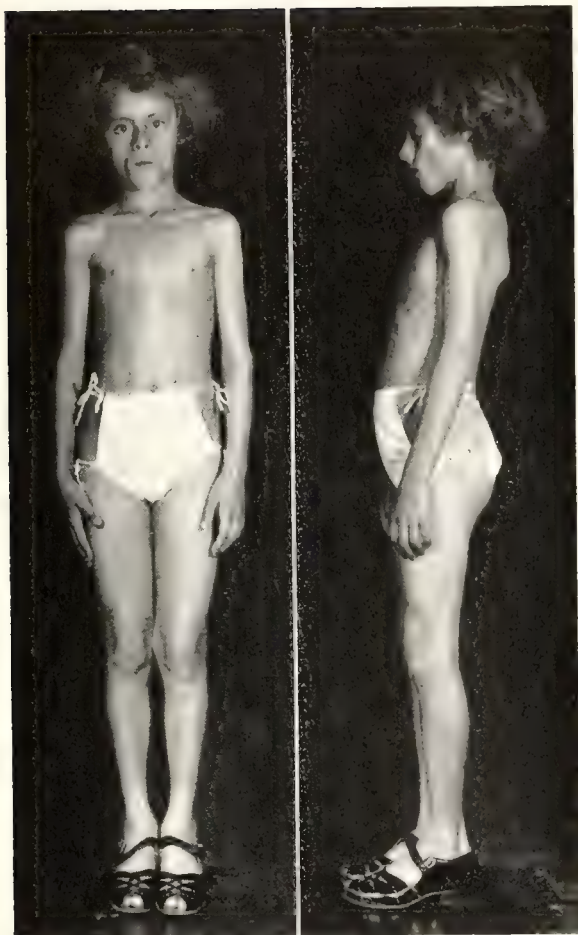


Fig. 3 (Case 2). Photographs of patient at the age of 8 years, showing marked loss of subcutaneous tissue of the face and upper body.

Intravenous urograms indicated normal kidney function, and normal pelves, calices, and renal shadows.

The hospital course was relatively uneventful, and the patient was discharged, with instructions regarding good general supportive care and careful follow-up.

#### Discussion

The two conditions which are most likely to be confused with progressive lipodystrophy are progeria and muscular dystrophy of the Landouzy-Dejerine type. Progeria is characterized by apparent dwarfism beginning at about the age of one year. Gradually thereafter the subcutaneous tissue over the body largely disappears. Body hair is scanty or absent, and the skin over the abdomen resembles that seen in scleroderma. The joints are prominent and limited in motion. In the facioscapulohumeral type of muscular dystrophy (Landouzy-Dejerine) the onset is early, frequently under two years of age. As

the disease progresses, the face becomes impassive and expressionless, and facial movements become more and more limited. The disease progresses slowly to other muscles, with progressive diminution of muscular power.

The differences between these two conditions and lipodystrophy should be obvious. Life expectancy, which is limited in patients with progeria and muscular dystrophy, is normal in lipodystrophy<sup>(5)</sup>.

#### Summary

A brief discussion of progressive lipodystrophy is given and two cases are reported.

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## PLEUROPERICARDIAL CYST

### Report of a Case

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RAIFORD D. BAXLEY, M.D.

and

J. J. McDONALD, M.D.

DURHAM

The first recorded indication of interest in the subject of pleuropericardial cysts was Cushing's paper on pericardial diverticula in 1937<sup>(1)</sup>. Mazer studied the subject in 1940<sup>(2)</sup>, reviewing 13 additional cases and reporting one of his own, to bring the total of reported cases to 54. He attributed the origin of these diverticula to encapsulated pericardial effusions, secondary to inflammations. In addition to the various cases of pericardial diverticula, several cases of thin-walled cysts in close relation to the pericardium have been found at autopsy and reported since 1929<sup>(3)</sup>. In 1934 Pickhardt removed a cyst, which showed a fibrous outer layer with an endothelial lining, from the left hemithorax<sup>(4)</sup>. Churchill presented a similar case in 1937<sup>(5)</sup>, under the classification of mediastinal cyst.

From the Surgical Service, State Hospital, Butner, North Carolina.



Since that time other authors have reported cases and added to the literature.

### *Etiology*

The origin of these cysts is intimately associated with the embryonic development of the endothoracic structures. At the present two theories have been advanced to explain the actual dynamics. Lambert<sup>(8)</sup> attributes the formation of the cysts to anomalies of the mesenchymal lacunae, which appear early in embryonic life to form the pericardial celom. Later, owing to the ingrowth of connective tissue, the pleuropericardial celom is separated into two parts. Irregularity in the development rate of one of the primitive lacunae, which help to form the pericardial celom, would explain the formation of a true congenital pericardial diverticulum. Failure of one of the lacunae to fuse with others would result in an independent cavity or a pericardial cyst.

Cooper, in reporting five cases from the University of Virginia in 1948<sup>(9)</sup>, supported Kindred's theory of unequal growth as the pleural cavities grow downward into the mesenchyme of the body wall, between the mesothelium of the pericardium medially and the ectoderm of the primitive thorax.

### *Symptoms and Differential Diagnosis*

These cysts are usually without symptoms, as was true in the case to be reported, in which the diagnosis was made by routine roentgen examination of the chest. Among the symptoms that may be produced, pressure, cough, dyspnea, and pain predominate. Parenti<sup>(10)</sup> reported a case in which the patient suffered for three years with a cough and asthmatic attacks before excision of the cyst brought complete relief. Parenti thought the asthmatic attacks were caused by the pressure of the tensely filled cyst on the nerve plexuses running in the walls of the right side of the heart, or by the pull of the pedicle on the vascular formation in the pulmonary hilus.

The diagnosis is based on roentgenologic evidence, and requires the demonstration of a circumscribed shadow of homogeneous density continuous with the diaphragmatic mediastinal and anterior chest wall shadows. The lesion is limited to the anterior inferior mediastinum, the contour is sharply defined, and the histologic structure makes a homogeneous density. Bronchoscopy and lipoidal studies, though usually negative, must be

done in order to rule out other mediastinal lesions and malignant growths. Elevations of the diaphragm can be identified by fluoroscopy. Diaphragmatic hernia can be ruled out by barium studies. Neurofibromas are usually found in the posterior mediastinum. Teratomas may contain calcium. A lipoma may be of homogeneous density, but the contour is less sharply defined than that of a cyst. It may be impossible to differentiate a cyst and a large fat pad, as was the situation in one of Cooper's cases.

At times it will be impossible to differentiate cysts and primary or metastatic malignant growths. Such an occasion necessitates exploratory thoracotomy, as advocated by Alexander<sup>(11)</sup>. Bigger, in the discussion of Alexander's paper, observed that if diaphragmatic hernia can be excluded, the aspiration of clear fluid may be diagnostic. A partial pneumothorax and roentgenogram of the chest, with the patient's head lower than the feet, may be used to explore the possibility of dermoids and teratomas, as these growths usually produce adhesions and do not change position.

### *Treatment*

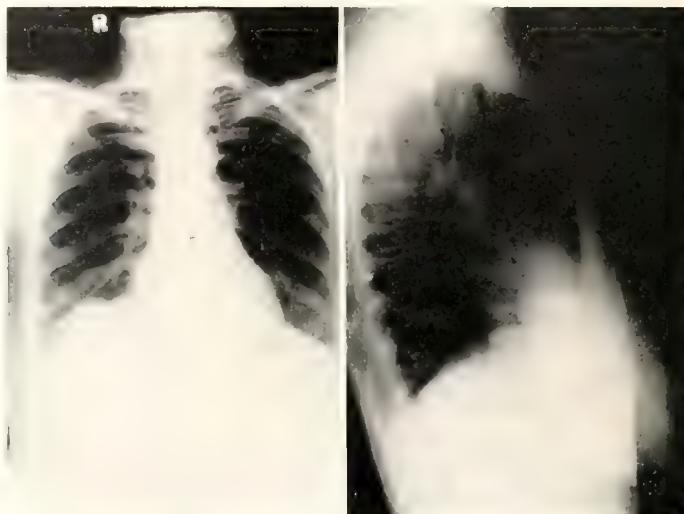
Since a true diagnosis can be established only by the removal and histologic study of these cysts, roentgen therapy and observation are not recommended in these cases. Prolonged observation by x-ray is not justified, because of the danger of missing an operable malignant condition. The surgical removal is quite easy, as the cyst is usually attached by a simple pedicle to the pericardial sac. In the case to be reported there were two pedicles, which were ligated with a no. 0 chromic catgut.

### *Case Report*

A 56 year old female was first admitted to the State Mental Hospital at Dix Hill in Raleigh, North Carolina on January 21, 1941. Her physical examination was essentially negative except that she was deaf and nearly blind. She was later transferred to the State Hospital, Butner, North Carolina.

The only symptoms this patients had were a slight cough and a slight pain in the right chest. A roentgenogram of the chest disclosed a mass at the right base anteriorly. Repeated x-ray studies on several occasions, showed no change in the appearance of the mass. The border was smooth, and a tentative diagnosis of tumor was made. Bronchoscopy did not

Fig. 1. Roentgenograms of the chest revealing the location of the pericardial cyst. Note the anterior location in the lateral view and the smooth contour of the mass.



reveal any obstruction or inflammation of the bronchi. The electrocardiogram was interpreted as normal, and bronchograms were negative. Sputum examinations were negative for tumor cells and acid fast organisms. An upper gastrointestinal series and barium enema were not significant. Diaphragmatic hernia was not demonstrated. On the basis of these findings an exploratory thoracotomy was performed on April 6, 1950.

A posterolateral approach was used in opening the chest, and a smooth pericardial cyst was found attached by a small pedicle to the right pericardium. The cyst was resected easily and the pedicle ligated with no. 0 chromic catgut (fig. 2). The chest was closed in routine manner.

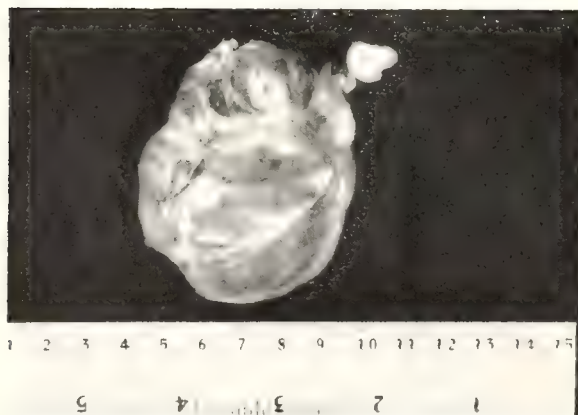


Fig. 2. Pericardial cyst. Note the relatively smooth border and the pedicle in the right upper quadrant.

The patient had a smooth postoperative course. A small hydropneumothorax which developed on the right, was absorbed without thoracentesis. The pathologic report revealed a pericardial cyst. Since the operation the patient has continued to progress nicely.

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### Army Doctors to Study Frostbite Injuries

A five man team of Army military and civilian experts in the field of cold weather injuries is now in Japan and Korea studying frostbite cases with a view toward improving methods of preventing and treating this type of injury, the Department of the Army has announced. The team is equipped with a considerable number of new drugs and methods for treating cold injuries, which will be compared to present techniques to determine which are better.



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APRIL, 1951

### THE ANNUAL MEETING OF THE STATE SOCIETY

The ninety-seventh annual meeting of the Medical Society of the State of North Carolina will be held in the familiar setting, Pinehurst, May 7, 8, and 9. The program, published in the March issue of the NORTH CAROLINA MEDICAL JOURNAL, should stimulate all North Carolina doctors to make a special effort to attend the meeting.

There is a good balance between our own members and guest speakers from other states. The A.M.A. will be ably represented by its president, the dynamic Dr. Elmer Henderson; by Dr. Frank E. Wilson of the Washington office, and by Mr. Aubrey Gates, Field Director of the Rural Health Committee. Among other distinguished out of state speakers will be Dr. Maurice Pincoffs, professor of medicine at the University of Maryland; Dr. Harry H. Gordon, professor of pediatrics, University of Colorado; Dr. Norvin C. Kiefer, director of the National Secur-

ity Resources Board; Dr. Robert Fleming, Peter Bent Brigham Hospital, Boston; Dr. Howard A. Rusk, professor and chairman, Department of Physical Rehabilitation, New York University—Bellevue Medical Center; Philip Thorek, clinical assistant professor of surgery, University of Illinois; Mr. Edgar J. Forio, vice president, the Coca Cola Company, Atlanta; Dr. Wilmer C. Betts, Captain, M.C. U.S. Army and psychiatrist, 7th Infantry Division, Korea; Dr. Carl A. Whitaker, associate professor of psychiatry, Emory University; and Dr. Robert P. Barden, assistant professor of radiology, Graduate School of Medicine of the University of Pennsylvania.

With such an attractive program, and with all that Pinehurst has to offer as an extra dividend for attending, the ninety-seventh annual session should be a record-breaking one. No president has ever worked harder for the Society than has Roscoe McMillan; the members can show their appreciation of his efforts by their attendance. They will be well repaid for the effort.

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### THE U.N.C. SPECIAL ISSUE POSTPONED

In 1948 the Editorial Board of the NORTH CAROLINA MEDICAL JOURNAL decided to have one special issue a year from one of the three medical schools in the state. The first issue, in April, 1949, was from Duke and was dedicated to Dr. Josiah G. Trent, who had been a member of the Board at the time of his death. The second issue, in March, 1950, was from Bowman Gray, and the material was collected by Dr. George Harrell. Since the third issue, from the University of North Carolina, will not appear this year, a word of explanation is in order. Dr. John B. Graham, who represents the University on the Editorial Board, and who has been chosen to collect material for the U.N.C. issue, asked that it be postponed until 1952, when it is expected that the medical school of the University will be functioning as a four year school. This permission was, of course, cheerfully granted by the other members of the Board. It is expected that the U.N.C. special issue will appear next spring—and that it will be a credit to the state University.

## THE PREPAID MEDICAL SERVICE INSURANCE PLAN

Every member of the State Medical Society has had ample opportunity to learn of the Society's Prepaid Medical Service Insurance Plan, to be issued to the low income group. No member of our Society, since the late Dr. Isaac H. Manning organized the Hospital Saving Association, has worked harder or more unselfishly than has Dr. V. K. Hart and his committee. Their report, finally adopted at the annual meeting last year, provided for a Medical Service Corporation to put into operation the proposed Medical Service Insurance Plan for the benefit of individuals with incomes of \$2400 or less, or of families with incomes of \$3600 or less.

This plan was adopted after long hours of careful consideration, and after conferences with men in other states who have had long experience with similar plans. It offers the best possible answer to the challenge of government medicine. Its success depends upon the cooperation given by the doctors of the state. Unless a sufficient number agree to render professional services to policy holders for the terms agreed upon, the plan can not be expected to succeed. It is to be hoped that the doctors of North Carolina will not, in the time-worn phrase, be backward about coming forward in support of this cooperative effort.

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## THE FOURTH ANNUAL GREENSBORO ACADEMY OF MEDICINE SYMPOSIUM

The fourth annual symposium of the Greensboro Academy of Medicine, held at the Jefferson Country Club on March 22, fully maintained the high standard set by previous symposiums. At the morning session, with Dr. Reece Berryhill presiding, Dr. Hans May of Philadelphia discussed the subject of "Hand Injuries," and Dr. Robert V. Terrell of Richmond spoke on "Office Proctology." After an hour's intermission and lunch, Dr. Conrad G. Collins of New Orleans discussed "Office Gynecology"; Dr. Paul H. Stevenson, of the National Institute of Mental Health, Bethesda, Maryland, "The Problem of Alcoholism"; and Dr. Garfield G. Duncan of Philadelphia, clinical professor of medicine, Jefferson Medical College, "The New Diabetic." Dr. Wayne J. Benton, President of the Greensboro Academy of Medicine, was toastmaster at the dinner meeting, and Dr. W. T. Sanger of Richmond, president of

the Medical College of Virginia, spoke on the subject, "The Health Conscious Public Asks Three Hard Questions."

Of necessity, only the afternoon discussions can be outlined briefly. Dr. Collins gave an excellent, down-to-earth talk on the technique of pelvic examinations; stated logically the objections to leaving the cervix when doing a hysterectomy; declared his belief that a retrodisplaced uterus may give symptoms, which may be relieved by suspension or hysterectomy; and showed how aspiration of the cul-de-sac was a valuable diagnostic procedure in suspected intra-abdominal bleeding, as in ruptured ectopic pregnancy.

Dr. Stevenson gave a most interesting and practical talk on "The Problems of Alcoholism." Of the 160 million people in the United States, he said, the 110 million above 15 years old are potential drinkers. Of these sixty-five million are occasional or social drinkers, and three to five million are problem drinkers, or true alcoholics. Alcohol from the chemical standpoint is an anesthetic. In treating the alcoholic, it is necessary to begin by putting him in the best possible physical condition; then physiologic and psychologic treatment is needed to help prepare him for rehabilitation. In his treatment, Dr. Stevenson, himself a psychiatrist, reiterated, "Keep the psychiatrist on tap, but not on top." He paid a tribute to the effectiveness of Alcoholics Anonymous, and said that its members practiced the most effective psychiatry possible.

Dr. Duncan packed into an hour's informal talk an almost unbelievable amount of information on the modern treatment of diabetes. He caught the attention of the audience by his first statement: "The fat diabetic is a mild case; the lean diabetic is a severe one." Most fat diabetics can be rendered free from glycosuria by a low calory diet, and should be treated by dieting before Nature makes them lose weight as their disease becomes more severe. He suggested for the average adult a diet of 1200 calories, containing 110 grams of protein, 30 of fat, and 125 of carbohydrate. Often the loss of 10 or 15 pounds would greatly decrease the patient's insulin needs.

The advantages and disadvantages of the different types of insulin was discussed. It was gratifying to the advocates of globin insulin to hear Dr. Duncan say that he used it a great deal. The new NPH has a slightly longer effect, but globin is quite satisfactory for many, if not most, mild diabetics.



In infections, as is well known, insulin becomes much less effective, and much larger doses are required. Dr. Duncan said that best results were obtained in infections by giving nourishment every six hours around the clock, and giving regular insulin before each meal. He suggested beginning with one third the usual daily requirement of insulin at each dose, so that there would be an initial increase of 25 per cent in the insulin dosage. Further increases could be made, if necessary.

Although this reporter did not hear the other addresses, they were said to be of exceptional interest. The members of the Greensboro Academy are to be congratulated on the excellence of their program.

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### HADACOL AVAILABLE ON PRESCRIPTION

At last the "new, miracle working medicine" Hadacol is available on prescription, according to letters sent out to doctors by the LeBlanc Corporation over the signature of "Leslie A. Willey, M.D., Clinical Research Director." The letter contains offers to send samples to interested physicians, and states that "HADACOL is also available under a PRESCRIPTION 'X' label."

The *Journal of the American Medical Association* for January 13 tells an interesting story about this brazen appeal to physicians. It pointed out that no Leslie A. Willey was listed in the 1950 American Medical Directory, but that the A.M.A. Bureau of Investigation had a record of a "Dr." L. A. Willey who had been arrested in Newport Beach, California, for practicing without a license and for the unauthorized use of the term "doctor." It was found that Mr. Willey was a male nurse who had been running some sort of emergency hospital until he was arrested and left town.

Hadacol, as the *Journal of the American Medical Association* shows<sup>(1)</sup>, is only an alcoholic solution of relatively small amounts of the vitamin B complex, plus a little iron and the now obsolete calcium glycerophosphate. An advertisement of Hadacol states that only the most expensive ingredients are used, "For instance, vitamin B-6 which costs at the factory \$550 a kilogram." The editor is so unkind as to comment: "The senator (LeBlanc) forgot to say that his \$550 worth of Vitamin

B<sub>6</sub> is enough for 125,000 bottles of Hadacol (half-pints at \$1.25 a bottle)."

That the manufacturer of Hadacol knows human nature is evidenced by the fact that he is a successful politician—"Senator LeBlanc of the Louisiana legislature." He is also a good advertising man, with a flair for the theatrical. He knows full well how to utilize the elementary principle of psychology laid down many years ago by the late master showman, P. T. Barnum: "The people like to be humbugged."

1. Hadacol—the Ethical(?) Proprietary, J.A.M.A. 145:107 (Jan. 13) 1951.

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### POSTGRADUATE EDUCATION FOR NEGROES

Dr. W. Z. Bradford's recent address as chairman of the Section on Obstetrics of the Southern Medical Association<sup>(1)</sup> is noteworthy for at least two reasons—one, the excellent record made by the southern states in general and by North Carolina in particular in reducing maternal mortality—from 6.0 per 1000 in 1937 to 1.7 per 1000 in 1948.

The second reason is that Dr. Bradford is not content with this record. Even though in North Carolina and a number of other Southern states the colored maternal rate was below the national average, the maternal death rate for colored women is still nearly three times that for white women. Dr. Bradford says that there is needed "an improvement and expansion of hospital facilities for maternity patients, especially of the colored race, and . . . more adequate professional supervision of every parturient through pregnancy and delivery." He believes that "more colored physicians should also be educated, who might participate in improving maternal welfare standards in the Southern Negro population."

That the Board of Trustees of the University of North Carolina share Dr. Bradford's feeling of responsibility for the education of Negro doctors was shown by its recent action in recommending that graduate students be admitted to the University for instruction that could not be had of equal quality elsewhere. This action of the trustees has been acclaimed throughout the nation, and underscores the editorial opinion of the *New York Times* that our state university is "a tower of enlightenment in the South."

1. Bradford, W. Z.: Obstetrical Progress in the Southern States, South. M. J., 44:121-124 (Feb.) 1951.

## Committees and Organizations

### NORTH CAROLINA TUBERCULOSIS ASSOCIATION

#### *Program of Annual Meeting*

O. Henry Hotel  
Greensboro, N. C.  
April 17-18, 1951

#### **Tuesday, April 17**

9:30 a.m.—Registration—Lobby  
11:00 a.m.—NCTA Board Meeting—Civic Room  
Afternoon

#### General Session

2:00-3:30—Ballroom (Second Floor)

#### Invocation—

Business Meeting of Association Membership—Dr. Herman Easom, President of North Carolina Tuberculosis Association, Presiding

#### I. Case-Finding Services

Official Agency—Dr. Robert F. Young, Health Officer, Halifax County  
Private Physician—Dr. J. J. Combs of Raleigh Hospital—Dr. E. E. Meneffee of Raleigh Tuberculosis Association—Mrs. Lois D. Durham, Executive Secretary Wake County Tuberculosis Association

4:00 p.m.

Presiding—Dr. S. B. McPheeters—Health Officer, Wayne County

#### II. Community Approach to Tuberculosis Control Family Aspects—Mrs. Isabelle Carter, Associate Professor, Social Work University of North Carolina

Community Resources—Dr. John J. Wright, Professor of Public Health, University of North Carolina

Team Concept—Dr. E. G. McGavran, Dean, School of Public Health, University of North Carolina

#### Dinner Meeting

7:00 p.m.—North Carolina Trudeau Society

Private Dining Room (Main Floor)

Presiding—Dr. M. D. Bonner, President, North Carolina Trudeau Society

Unpredictable Anatomical and Physiological Factors in Diseases of the Chest—Dr. John H. Skavlem, President-elect of American Trudeau Society

#### Evening Session

8:00 p.m.—Public Health Section—Ballroom

Presiding—Miss Virginia Ryan, Executive Secretary, High Point Tuberculosis Association

Session on Seal Sale—Ballroom

General Session breaking into two or three sessions and then reconvening into general session

#### **Wednesday, April 18**

9:30—Public Health Section—Ballroom

Presiding—Eleanor H. Smith, President, North Carolina Conference of Tuberculosis Secretaries; Executive Secretary, Lenoir County Tuberculosis Association

Symposium—Tuberculosis Patient, Family and Community Education

Doctor's Role—Dr. A. Derwin Cooper, Medical Director, Durham County Sanatorium

Public Health Nurse—Mrs. Mary K. Bailey

Social Service—Miss Janet Wien

Tuberculosis Association—Mrs. C. O. DeLaney, Executive Secretary, Forsyth County Tuberculosis and Health Association

Medical Section—Belle Meade Room

Presiding—Dr. C. G. Milham, Vice President, North Carolina Trudeau Society

Geriatric Tuberculosis—Dr. William Peck of McCain and Dr. Will Hewitt of McCain  
Appraisal of Abnormal X-ray Chest Films Found in Mass Surveys—Dr. John H. Skavlem, President-elect of American Trudeau Society

Physiotherapy and Chest Therapy—Members of Dr. J. D. Murphy's Staff from Oteen

12:30 p.m.—Luncheon Meeting—Ballroom

Presiding—Dr. Herman F. Easom, President, North Carolina Tuberculosis Association

Invocation—

Speaker—Leigh Mitchell Hodges—Newspaper Columnist, Philadelphia, Pennsylvania

Exhibits—Mezzanine

## BULLETIN BOARD

### NEWS NOTES FROM THE DUKE UNIVERSITY SCHOOL OF MEDICINE

#### Duke Biochemist Will Join Team to Improve Japanese Medical Teaching

A Duke University biochemist, Dr. Philip Handler, will join a team of 12 medical educators who leave for Japan in May to try to improve medical teaching there. Dr. Handler, professor of biochemistry and nutrition, Duke School of Medicine, will spend two months in Japan and will report on his findings to General Douglas MacArthur.

The team of scientists, each a specialist in a different medical field, will try to bring teaching methods in Japan in line with those of the United States. Medical schools there now are said to be much like those in Germany after World War I.

The team will (1) examine teaching and research methods in the Japanese medical schools, and (2) deliver "typical" lectures and demonstrations to students and staff members.

The project is being directed by the Unitarian Service Committee acting on behalf of the Department of Defense.

Schools represented besides Duke are Harvard, Yale, Stanford, Michigan, California, Emory, Washington University in St. Louis, Wayne (Detroit) and the Medical College of Georgia.

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#### Course in Medical Mycology

A month's course in medical mycology, under the direction of Dr. Norman F. Conant, is to be offered at the Duke University School of Medicine and Duke Hospital, July 2-28. The course will be offered daily, except Sunday, and has been designed to insure a working knowledge of the human pathogenic fungi.

The practical aspects of the laboratory as an aid in helping establish a diagnosis of fungus infection will be stressed. Work with patients, clinical material, cultures and laboratory animals will serve as a basis for this course. Also, an opportunity to study pathologic material, gross and microscopic, will be given those whose previous training would allow them to obtain the greatest benefit from a study of such material.

The number of applicants for the course will be limited, and the applications will be considered in the order in which they are received. An attempt will be made, however, to select students on the basis of their previous training and their stated need for this type of work.

A fee of \$50.00 will be charged for this course, upon the completion of which a suitable certificate



will be awarded. Please direct inquiries to Dr. Norman F. Conant, Professor of Mycology, Duke University School of Medicine, Durham, North Carolina.

### NEWS NOTES FROM THE BOWMAN GRAY SCHOOL OF MEDICINE OF WAKE FOREST COLLEGE

Dr. Eben Alexander, assistant professor of surgery in charge of neurosurgery, presented a paper on "The Diagnosis and Treatment of Painful Neurological Syndromes" at the third annual session of the North Carolina Academy of General Practice held in Durham, March 4-6.

Outstanding heart specialists from throughout the country participated in the annual Winston-Salem Memorial Heart Symposium sponsored by the Winston-Salem Heart Association on April 12 and 13. Dr. R. L. McMillan of the Bowman Gray School staff was in charge of arrangements.

Dr. Ernest H. Yount, Jr., of the department of internal medicine and Dr. Weston M. Kelsey of the department of pediatrics have recently received research grants from the United States Public Health Service. Dr. Yount's, for the amount of \$12,000, will be used in the study of the effect of ACTH and cortisone on the kidneys. Dr. Kelsey and Dr. J. Maxwell Little of the department of physiology and pharmacology will work with him on the project. Dr. Kelsey's grant of \$8,025 is for research on fluid distribution and electrolyte balance in children.

Dr. Edward C. Hughes, professor of obstetrics at State University Medical Center, Syracuse, New York, was speaker at the March meeting of the Bowman Gray Medical Society. His subject was "Intrinsic Metabolism of the Endometrium of the Uterus and its Relation to Foetal Growth."

A two day meeting of the Wake Forest College Medical Alumni Association was held April 6 and 7. Alumni visited the medical school laboratories, the hospital, Graylyn, and the new site of Wake Forest College; attended clinics in various specialties and a clinicopathologic conference; and held a dinner at which Dr. Harold W. Tribble, president of Wake Forest College, made the address, following a talk by Dean C. C. Carpenter. Dr. D. Russell Perry of Durham is president of the Association, and Dr. H. M. Vann of the Bowman Gray School staff is secretary-treasurer.

### NORTH CAROLINA COMMITTEE ON CHRONIC ILLNESS

The State Committee on Chronic Illness held its first meeting in Chapel Hill in February. Present for the meeting were Dr. George Harrell, chairman, Bowman Gray School of Medicine; Dr. C. Horace Hamilton, North Carolina State College; Frank W. Webster, North Carolina Tuberculosis Association; Jack McGee, National Foundation for Infantile Paralysis; James T. Barnes, North Carolina Medical Society; Dr. A. H. Elliott, North Carolina State Board of Health; Dr. Edward Hiatt, University of North Carolina Medical School; Doctors Cecil Sheps and Edward McGavran, University of North Carolina School of Public Health; Edward Brown, North Carolina League for Crippled Children; Miss Katherine Ormston, North Carolina State Heart Association; and Doctors Chapman and Crawl of the United States Public Health Service.

Various surveys on chronic illness were discussed and it was concluded that surveys should be made at the county level. No definite recommendations were made but it was agreed that the group would ask that a committee from the State Medical Society be appointed to consider giving special attention to chronic illnesses at the society's next meeting.

### CARTERET COUNTY MEDICAL SOCIETY

The Carteret County Medical Society held its regular meeting on March 12, at the Morehead City Hospital. This was a dinner meeting, the hospital acting as host.

Dr. S. W. Hatcher, Morehead City, discussed the significance of certain serologic tests in the case of pregnancy.

Dr. B. F. Royal, Morehead City, delegate from the society, made an interesting report on the State Defense Meeting held in Greensboro early in March.

Dr. N. Thomas Ennett, local Health Officer, read a paper entitled, "Draw the Line Between Preventive and Therapeutic Medicine." Among other things he pointed out that "public health and private practice are interdependent; that the private practitioner and the health officer are both making common cause against a common enemy—disease and death; that the private practitioner guards the individual against disease and death, and the health officer so guards the public." He expressed the opinion that "the private practitioner is always ready to support any reasonable public health program," and that "socialized medicine would lower the standard of medical practice, and is not in the interest of the public."

The local Business and Professional Women's Club has requested that the society organize a cancer clinic. The society appointed a committee to investigate the matter.

Dr. Frank E. Hyde, prominent physician of Beaufort, was unanimously nominated for the title of the "Doctor of the Year."

N. Thomas Ennett, M.D.  
Corresponding Secretary

### JOINT MEETING OF THE FORSYTH COUNTY AND GUILFORD COUNTY MEDICAL SOCIETIES

The medical societies of Forsyth and Guilford counties held a joint meeting on the Balinese Roof of the Robert E. Lee Hotel, March 8. Prior to the dinner meeting, which began at 7:00 p.m., a period of entertainment was provided by Drugs Specialties, Inc. Following the dinner, an authoritative discussion of "Comprehensive Insurance for the Low Income Groups" was conducted under the sponsorship of the North Carolina Medical Society.

### FIFTH DISTRICT MEDICAL SOCIETY

The spring meeting of the Fifth District Medical Society was held at North Carolina Sanatorium, McCain, on Thursday, March 29. The following program was presented at the afternoon session:

"Urinary Tract Calculi"—Dr. J. M. Harry, Fayetteville

"Medical Preparations for Civilian Disaster"—Dr. Chauncey L. Royster, Raleigh

"Treatment of Burns"—Dr. Felda Hightower, Winston-Salem

"Common Diseases of the Eye"—Dr. R. Winston Roberts, Winston-Salem

Mr. Leroy H. Cox, state director of public relations, was speaker at the dinner session.

## SECOND DISTRICT MEDICAL SOCIETY

The Second District Medical Society, representing nine counties in the coastal area of North Carolina, held a dinner meeting at the Washington Yacht and Country Club, Friday evening, April 6. Dr. Roscoe D. McMillan, president of the State Society, and other state officials were special guests. Speakers at the scientific session were Dr. Clark Rodman of Washington, whose subject was "The Use and Development of Cortisone," and Dr. William Nicholson of Duke, who spoke on "New Aspects in the Treatment of Hyperthyroidism." About seventy-five doctors attended the meeting.

## NEWS NOTES

Dr. Hubert B. Haywood, Jr., has opened offices in Raleigh for the practice of ophthalmology.

Dr. Henry P. Royster, son of Dr. Hubert A. Royster of Raleigh, will serve as surgical consultant for the April tour of Army hospital installations in Germany and Austria, accompanying Dr. Elbert L. Persons, Governor of the American College of Physicians for North Carolina. Dr. Royster is engaged in the practice of plastic surgery in Philadelphia.

## MEDICAL COLLEGE OF VIRGINIA

The office of the Medical Society of Virginia and the Virginia Medical Monthly has been moved to 1105 West Franklin Street, Richmond 20, Virginia.

## SOUTHEASTERN SURGICAL CONGRESS

The nineteenth Graduate Assembly of the Southeastern Surgical Congress was held April 11-14 at Hollywood, Florida. Included among the guest speakers was Dr. A. T. Miller, Jr., of Durham, whose subject was "Recent Studies on Obesity."

## AMERICAN COLLEGE OF PHYSICIANS

The thirty-second annual session of the American College of Physicians was held in St. Louis, Missouri, April 9-13. Among the speakers was Dr. Kenneth M. Brinkhous, professor of pathology of the University of North Carolina, whose subject was "Current Concepts of the Coagulation Mechanism."

## MICHAEL REESE HOSPITAL POSTGRADUATE SCHOOL

The following additional courses have been announced by the Michael Reese Hospital Postgraduate School: a one week course in "Recent Advances in Pediatrics," May 21-26; a two weeks' course in "Diseases of the Endocrines," July 9-21; a two weeks' course in "Hematologic Diagnosis," July 23-August 4. For further information, address: Dr. Samuel Soskin, Dean, 29th Street and Ellis Avenue, Chicago 16, Illinois.

## AMERICAN RADIUM SOCIETY

The success and failure of treatment as applied in various forms of cancer will be studied at the thirty-third annual meeting of the American Radium Society, which will be held in Atlantic City, June 7, 8, and 9. Dr. Hugh F. Hare, of the Lahey Clinic in Boston, the Society's president-elect, said

that the three day meeting this year would feature a well rounded symposium on tumors of the head and neck.

## AMERICAN MEDICAL ASSOCIATION

Medical societies in 329 communities have established night and emergency doctor call systems, according to a report by the Board of Trustees of the American Medical Association. A survey made in the summer of 1948 had shown only sixty such plans in operation.

"While these plans vary greatly according to the size of the community, they all have the same purpose—to guarantee that the people of the community can obtain a doctor at any time of the day or night, any day in the year," it was stated by Dr. Louis H. Bauer of Hempstead, New York, chairman of the Board of Trustees.

"The systems are so efficient that even in New York County, which operates the largest emergency call system in the country, it requires no more than seven or eight minutes to have a doctor on his way to answer a call."

Dr. Bauer added that the board "urges all county medical societies that have not yet established a formal plan for answering night and emergency calls make that a completed project during the coming year."

## NATIONAL SOCIETY FOR CRIPPLED CHILDREN AND ADULTS

Seventeen fellowships totaling \$5,000 were awarded jointly by Alpha Gamma Delta, international women's fraternity, and the National Society for Crippled Children and Adults, the Easter Seal Agency, to employment and placement counselors for a special course designed to help meet the employment problems of handicapped workers.

The grants accompanying the fellowships covered tuition and maintenance for the special course, which was held March 12 to April 6, at the new Institute of Rehabilitation and Physical Medicine, New York University, under the auspices of the School of Education. Bernard Sandick, junior rehabilitation counselor, of Raleigh, was among those receiving fellowships.

The purpose of the counselor training program is to encourage public and private agencies to increase their services for the severely handicapped. The fellowship winners, upon completion of the course, returned to their respective places of employment to apply their specialized knowledge and techniques to the counseling and employment problems of the handicapped.

## COMMISSION ON CHRONIC ILLNESS

The problems of preventing cancer, heart and blood vessel diseases, chronic arthritis and rheumatism, and poliomyelitis were attacked at working sessions of the National Conference on Chronic Disease: Preventive Aspects held in Chicago in March. The three day conference was sponsored by the national Commission on Chronic Illness, in cooperation with the U. S. Public Health Service and the National Health Council. The Commission, an independent national agency, was founded jointly by the American Medical Association, American Hospital Association, American Public Health Association and the American Public Welfare Association.



## AMERICAN COLLEGE OF CHEST PHYSICIANS

The Seventeenth Annual Meeting of the American College of Chest Physicians will be held at the Ambassador Hotel, Atlantic City, New Jersey, June 7 through 10. An interesting scientific program has been arranged for presentation at the meeting.

The Board of Examiners of the College has announced that the next oral and written examinations for Fellowship will be held in Atlantic City on June 7. Candidates who would like to take the examinations should write the Executive Secretary, American College of Chest Physicians, 500 North Dearborn Street, Chicago 10, Illinois.

The Convocation ceremonies will be held at the Ambassador Hotel, Atlantic City on Saturday, June 9, at which time Certificates will be awarded to new Fellows of the College.

Dr. George C. Crump, Asheville, is Governor of the College for North Carolina.

## AMERICAN HEART ASSOCIATION

### Council for High Blood Pressure Research

Research scientists and business executives heard a report of progress against the greatest enemy of the human heart, high blood pressure, at the Annual Conference of the Council for High Blood Pressure Research of the American Heart Association which was held in Cleveland on Friday and Saturday, April 6 and 7.

The Council for High Blood Pressure Research was formerly The American Foundation for High Blood Pressure. It was merged with the American Heart Association on January 1, 1950, becoming one of the component Councils of the Association's Scientific Council.

The use of various drugs in the treatment of cancer was also discussed at the meeting. A series of papers was presented to tell doctors "what's new" in the treatment of cancer by biochemical means and also by the use of radioactive isotopes.

Among those who took part in the radioactive isotope symposium were Dr. Richard H. Chamberlain, Philadelphia; Dr. James F. Nolan of Los Angeles and Drs. J. L. Morton, William G. Myers, Allan C. Barnes and George W. Callendine, of Columbus, Ohio.

On Saturday morning, Dr. David A. Karnofsky, New York, discussed one of the new nitrogen mustard compounds in the treatment of neoplastic disease. Dr. Calvin Klopp, of Washington, D. C., also discussed the administration of nitrogen mustard as an adjunct to radiation therapy in the treatment of cancer. A review of "All Cases of Hodgkin's Disease: Symptoms, Methods of Treatment and Longevity," was given by Dr. William E. Howes of Brooklyn, New York.

Highlighting the convention program was the Janeway Lecture, which was delivered by Dr. H. Dabney Kerr, Iowa City, Iowa.

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### Tensions of Today Seen as Cause of Heart Strain

The tensions of our times will take their toll of our leadership unless the people under pressure take certain precautions, declares Dr. Howard B. Sprague, President of the American Heart Association, in the introduction to the pamphlet, **Your Blood Pressure and Your Arteries**, written by Alexander L. Crosby and published by the nonprofit Public Affairs Committee. (Copies may be obtained at 20 cents each from the Public Affairs Committee, 22 East 38th Street, New York 16, New York.)

"The pressure is on again," Dr. Sprague warns.

"Business, government, and industry are marshalling strength to build the country's defenses. The age bracket of leadership—from 32 on—roughly corresponds to the ages when high blood pressure develops."

**Your Blood Pressure and Your Arteries** tells what precautions are necessary, he points out. "It also gives good advice to the 20 per cent of the adult population who already have high blood pressure or hardening of the arteries.

"Many patients have the mistaken notion that because they are sick they can't do anything. This is not necessarily true. In recent years the scope of their activity has been redefined and broadened. For many sufferers, new medical developments have outmoded invalidism.

"If you wish to hold your job and avoid being an invalid, you may have to make some concessions to your high blood pressure," the pamphlet warns. A few short rules suggested for those who have high blood pressure:

1. Walk—never run—up stairs.
2. Quit anything before you get overtired.
3. Relax or nap twice a day.
4. Eat four or five light meals instead of three heavier ones.
5. Go easy on coffee and on tobacco.
6. If possible, quit work a little early and exercise outdoors for an hour.
7. Go to bed well before midnight.
8. Keep your weight normal.
9. Argue and worry as little as possible.

A major effort to stimulate public support of research in the cardiovascular field is being conducted at the present time by the American Heart Association and its affiliates through the 1951 Heart Fund. The Association is seeking \$8,000,000 to finance its nationwide program and research as well as education and community service.

## MOUNT SINAI HOSPITAL

Physicians and surgeons throughout this country and Cuba are being invited to attend the First Annual Medical Seminar in Cardiovascular Diseases of Mount Sinai Hospital, Miami Beach, Florida. The event will be held on May 23, 24, and 25, at the Sorrento Hotel in Miami Beach.

Outstanding medical and surgical specialists in the cardiovascular field throughout the country have been invited to participate in the seminar. Under discussion will be various forms of heart diseases and peripheral vascular diseases from the medical, surgical, physiologic and pathologic points of view. Recent work on cholesterol metabolism also will be reviewed.

Guest speakers at the seminar will include:

Dr. David I. Abramson, Chief, Peripheral Circulatory Clinic, Michael Reese Hospital; Dr. Claude S. Beck, Professor of Neurosurgery, Western Reserve University, School of Medicine; Dr. Samuel Bellet, Associate Professor of Cardiology, Graduate School of Medicine, University of Pennsylvania; Dr. John W. Gofman, Associate Professor of Medical Physics, Donner Laboratory, University of California; Dr. Seymour S. Kety, Professor of Clinical Physiology, Graduate School of Medicine, University of Pennsylvania. Dr. Charles W. Robertson, Associate Visiting Surgeon, Massachusetts Memorial Hospitals; Dr. Otto Saphir, Director of Pathology, Michael Reese Hospital.

Those interested may obtain further information by writing to: Chairman, Seminar Committee, Mount Sinai Hospital, 4300 Alton Road, Miami Beach, Florida.

## MARKLE FUND GRANTS

Twenty medical scientists have been appointed as the fourth group of "Scholars in Medical Science" under the program of the John and Mary R. Markle Foundation, designed to keep young doctors on medical school teaching and research staffs, John M. Russell, executive director of the fund announced recently. Mr. Russell also announced the decision of the Board of Directors to increase the amount of the grant by \$1,000 a year, making the five year total \$30,000 instead of \$25,000. Beginning July 1, this increase will also apply to the forty-six current grants made during the first three years of the program. All grants will be made direct to the medical schools at the rate of \$6,000 annually, earmarked for support of a specific doctor and his research.

The Scholars were selected from candidates proposed by accredited medical schools and interviewed by regional committees appointed by the Foundation.

## AMERICAN PHYSICIANS' ART SHOW

The American Physicians Art Association will have an art exhibit, as usual, during the A.M.A. convention at Atlantic City, New Jersey, June 11 to 15, inclusive. Any physician in the United States, Canada, and Hawaii desiring to participate in this show should communicate with the secretary for particulars.

J. Henry Helser & Co., Inc., Investment Managers, with offices on the Pacific Coast, are the new sponsors of the American Physicians Art Association, and will award 200 trophies, besides a special Helser Trophy—a large decorative cup depicting Yankee Ingenuity. This cup is to be awarded for art work done in any medium. Also the large Popularity Trophy will be awarded to the owner of the art piece receiving the most popular votes during the A.M.A. convention. Over 4,000 members of the American Physicians Art Association will receive entry blanks, shipping labels and rules about this fourteenth art exhibition.

The Annual Art Banquet will be held Tuesday evening, June 12, at the Marlborough-Blenheim Hotel, Atlantic City.

F. H. Redewill, M.D., Secretary  
American Physicians Art Association  
760 Market Street  
San Francisco 2, California

## INTERNATIONAL CONGRESS OF PHYSICAL MEDICINE (1952)

### Preliminary Notice

The International Congress of Physical Medicine will be held in London, July 14-19, 1952.

In accordance with the regulations of the International Federation of Physical Medicine, the meetings of the Congress will be reserved for matters dealing with the clinical, remedial, prophylactic and educational aspects of physical medicine, and with the diagnostic and therapeutic methods employed in physical medicine and rehabilitation. Technical, scientific and historical exhibitions also will be arranged.

In addition to the Scientific Program, a full program of social events and entertainment is being planned for the members and associate members. Arrangements for London and provincial visits of scientific and historical interests are also being made for the Congress week and the following week.

Applications for the Provisional Program should be addressed to the Honorary Secretary, International Congress of Physical Medicine (1952) 45, Lincoln's Inn Fields, London, W.C.2.

## FEDERAL SECURITY AGENCY

Assignment of Dr. Estella Ford Warner to a foreign mission in public health under the Point 4 program was announced recently.

As Regional Public Health Representative in the Near East, Dr. Warner will participate in a new project under which Point 4 grants and technical services will be used to help establish a school of public health at the American University in Beirut, Lebanon. This will be the first public health training facility in the area, and will train students and subprofessional personnel from all the Arab countries so that they will be equipped to improve health conditions in their own countries.

\* \* \*

Five consolidated listings showing the sanitary status of sources from which United States railroads, airlines, buses, and ships normally obtain milk, ice cream, and drinking water supplies for their passengers when traveling in this country and Canada were released recently by the Public Health Service of the Federal Security Agency.

The listings are expected to aid carriers to obtain these supplies only from approved sources and thus help to check the transmission of water-borne and food-borne diseases across state borders and the U. S.-Canadian border. They are expected also to simplify the system of records and inspections used by state health departments and the Public Health Service in classifying the sources.

Future editions of the classifications will appear three times a year and will be dated January 1, May 1, and September 1.

Copies may be obtained from the Federal Security Agency's regional offices in Boston, New York, Washington, Cleveland, Chicago, Atlanta, Kansas City (Mo.), Dallas, Denver, and San Francisco.

## DEPARTMENT OF DEFENSE

### Medical and Dental Officers Ordered To Active Service

The Department of the Army announced recently that 300 medical and 100 dental officers of the Medical Service Reserve will be ordered into the active military service during the month of April. The 400 officers are in Priority I as established by Public Law 779 of the Eighty-first Congress.

The officers will be given at least thirty days in which to close out personal and business affairs, unless they wish to report at an earlier date.

This is the first group of medical and dental officers ordered into active military service by the Army since December 26, 1950, when 890 medical and 850 dental officers were ordered to active service.

Priority I for medical and dental Reserve officers applies to those who participated as students in the Army Specialized Training Program or similar programs administered by the Navy, and those deferred from service during World War II to pursue a course of instruction leading to an education in medical and allied specialist categories or dental and allied specialist categories, and who have had less than ninety days' active military service following completion of or release from the program or course of instruction.

\* \* \*

### Navy Fights Epidemics in Far East With Specially Fitted Laboratory Ship

A complete Navy epidemic control laboratory, installed aboard a landing ship for mobility and equipped to cope with epidemics of contagious disease, has arrived in the Far East.

The ship, an LSI(L)—Landing Ship, Infantry, Large—used during World War II in Okinawa land-



ings, is designed to move into infested ports or beachheads and knock out disease before it spreads to epidemic proportions.

Remembering that "typhus and allied diseases have caused more military defeats than all the generals in history," both Army and Navy medical officers have stressed control measures in Korea.

In charge of work with war-stricken Korean natives is Lt. Gerald A. Martin, MC, USN, of Baltimore, Maryland. Doctor Martin was reared in Korea, where his father taught medicine at Seoul University. He speaks Korean fluently.

(BULLETIN BOARD CONTINUED ON PAGE 168)

### Parke, Davis & Co. Reports Record Sales and Earnings in 1950

Parke, Davis & Co. recently reported net sales of \$105,707,659 and net earnings of \$17,864,830 for 1950, both the highest in the drug company's 84-year history.

Dr. A. William Lescohier, Parke-Davis president, said in the annual report now being received by stockholders that the 1950 net sales, "among other things, reflect the increasing availability of our new antibiotic drug, Chloromycetin, and its widespread acceptance and use by the medical profession throughout the world."

Besides Chloromycetin, the firm manufactures more than 1,400 other products.

During 1950, the company developed and commercially released more than 30 new products. They included Camoquin Hydrochloride, a new compound highly effective in the treatment of malaria; Kutrol Kapseals, a fundamental new approach to the treatment of peptic ulcer; Promacetin, an orally-effective compound for the treatment of leprosy; and Penicillin S-R with Dihydrostreptomycin, a combination of two outstanding antibiotic agents designed to combat a wide range of infectious diseases.

Commenting on Chloromycetin, the company said, "The experience of the past year has served to further confirm and support the statement made in the Annual Report issued two years ago—namely, that the development and synthesis in our own laboratory of this new antibiotic drug constituted one of the most outstanding achievements in the history of the pharmaceutical industry."

### New Antimalarial Replaces Atabrine

Production of Aralen, the antimalarial drug which has taken the place of Atabrine in use by American armed forces, has tripled since Korean hostilities began and will be stepped up another 140 per cent by July, it was disclosed recently by Dr. Theodore G. Klumpp, president of Winthrop-Stearns, Inc.

Aralen is known chemically as 7-chloro-4 (4-diethylamino-1-methylbutylamino) quinoline diphosphate. Clinical investigation has shown it to relieve acute attacks of malaria much faster than previously known drugs, and to cure falciparum malaria, a type of disease that is non-relapsing but often fatal.

Every G. I. stationed in the malarious regions of the world during World War II was familiar with Atabrine, nicknamed the "little yellow pill." G. I.'s had to take one tablet (0.1 gram) every day as a suppressive or prophylactic dose. A curative treatment required 28 Atabrine tablets over a seven day period.

Comparative doses with Aralen, which is a white tablet, are one tablet (0.5 gram) per week as a suppressive or prophylactic dose, and five tablets over only a two and one-half day period for cure, Dr. Klumpp explained. Aralen does not produce temporary discoloration of the skin, as Atabrine did, he pointed out.

## AUXILIARY

### MESSAGE FROM THE NATIONAL PRESIDENT

It is a privilege to be alive in the year 1951. You may think this is a dubious assertion at a time when we seem to be tormented by well nigh insoluble problems. I do not feel that way, however, for I know and if you think a minute you will agree with me, that no problem is insoluble to the American people if they really wish to solve it.

Our cause is estimable, our ideals are lofty and as Emerson has said "We believe a nation of men unanimously bent on freedom can easily confound the arithmetic of statistics."

As wives of physicians, we should become leaders in the field of Civil Defense. Every county should have a group studying the Civil Defense program to prepare its membership to go out as teachers and helpers in their respective communities. The picture "They Also Serve" is available to you if you write Miss Wolfe at central office. If we understand the situation that confronts us and know what to do when an emergency arises, we can do much to calm the fears of others. Doing such patriotic and constructive work at this time is most important and I urge you to do it; but do not forget to continue to carry on your assistance to and your cooperation with the National Education Program. Their work is still vital and we have a definite part in it. It is so easy for "war emergency programs" to embrace other legislation in our field before the majority of the people are cognizant of it. We must continue to be on the alert.

Our nurse recruitment program and our cooperation with the nurses has assumed a new importance since the outbreak of the Korean War. The longer this war continues the more acute becomes the shortage of nurses. Every state and county organization should redouble its efforts to find the answer to this problem. The National and State Auxiliaries can only make suggestions: on the County Auxiliary depends the outcome.

This year, for the first time, county legislative chairmen have received *Capitol Clinics*. This is a service of the Washington office of the American Medical Association and was obtained by your National Legislative Chair-

man. Please make good use of this material and after you read it pass it on to others to read. It is an expensive as well as a tedious undertaking and will not be continued unless each copy is read by more than one person. Also, last month you received your first copy of *P. R. Agenda*, a new venture of your public relations chairman. I thought it interesting and informative. I hope you enjoyed it and used it in you county programs.

Much valuable information regarding our work is to be found in our *National Bulletin*. Both the *Bulletin* and *Today's Health* should help us in many ways these trying days. I urge you to employ every means at your disposal to increase the circulation of these periodicals.

The A.M.A. House of Delegates, at its interim meeting in Cleveland, added another leaf to its book of good deeds for the American public, when it gave \$500,000 for aid to medical schools.\* We of the National Auxiliary are proud to be so closely associated with an organization composed of such clear thinking and courageous men, a group that has the ability to see the right thing to do and then has the courage to do it. We of the National Auxiliary hope this fund will grow and receive the support it deserves.

Mrs. Arthur A. Herold

\* The A.M.A. has stated that contributions to this fund to medical school can be earmarked for the particular school of which the contributor is an alumnus.

\* \* \*

## NEWS NOTES

Are you planning to attend the State Convention in Pinehurst May 7, 8, and 9?

Interesting things have been planned for you, among them a golf tournament on Monday afternoon and a session for the gardeners present. In connection with the luncheon on Tuesday will be a fashion show presented by the exclusive Mary Rice Shop of Hamlet. On Wednesday morning there will be a breakfast for state officers and county presidents and presidents-elect. The board meeting will be Monday night. Tuesday marks the day of the main business meeting.

A most charming visitor to the Convention will be Mrs. Mason Lawson, Little Rock, Arkansas, who is National Third Vice President.

\* \* \*

A few more months and the members of the Woman's Auxiliary to the American Medical Association will be arriving in Atlantic

City, New Jersey, for their Annual Convention, June 11-14. Have you made your reservations? If not, send your request *at once* to Dr. Robert A. Bradley, Chairman A.M.A. Housing Bureau, 16 Central Pier, Atlantic City, New Jersey.

\* \* \*

Mrs. J. W. Huston of Asheville, who was State President of the Auxiliary in 1934, died March 18.

## BOOK REVIEWS

**Twentieth Century Mental Hygiene: New Directions in Mental Health.** By Maurice J. Shore et al. 444 pages. Price, \$6.00. New York: Social Sciences Publishers, 1950.

This book represents a tremendous undertaking, that of bringing to the professional as well as the lay reader the remarkable advances made during this century in the field of mental hygiene. It is a collection of articles by many authors prominent in this field, as well as in their own specialties of psychiatry and psychology.

The reader is impressed with the great strides made in understanding individual as well as social emotional problems resulting from the two most devastating conflicts this world has yet known—World Wars I and II. The problems created by these two wars not only stimulated great activity in psychiatry, psychology, psychiatric social work and allied fields, but afforded abundant opportunity for statistical analysis, research in diagnostic and therapeutic measures, and training methods. These studies have been applied and expanded during the postwar period.

As the authors point out, much has been accomplished in both theoretical and practical fields, but much yet remains to be done. There is still no unanimity of theoretical opinion in many areas, notably in the different philosophic beliefs regarding "motivation" of life. Many practical problems, chiefly related to economics and politics, are handicapping the advance of the mental hygiene movement, more in some areas than in others. Much cultural prejudice has been overcome by the successes in the military and civilian enterprises as a direct result of the advances in mental hygiene in the past thirty-five years, but the need for continuing this educational program is more obvious every day, even in the more enlightened communities. As Maurice J. Shore points out in the last chapter, too little attention has been devoted in the past to the so-called normal individual, except as a reflection of our studies of abnormal individuals.

This reviewer has two criticisms of the book to offer. The first is the unnecessarily large number of typographical errors it contains. These errors not infrequently cause the reader to stop and ponder to figure out what a word was supposed to be in order to understand the meaning.

The other criticism is more serious. There does not seem to be in this volume adequate coverage of the tremendous contributions to the advance of the mental hygiene movement made by sociology, an-



thropology, and religion. Man's spiritual evolution, his need of and search for "faith," has always been and will continue to be one of the most basic and potent factors in mental health. It is this reviewer's belief that a minister qualified in clinical pastoral work should be the fourth member of the mental hygiene clinic team.

Otherwise, *Twentieth Century Mental Hygiene* is an interesting, stimulating and worth-while book.

**Paracelsus: Magic into Science.** By Henry M. Pachter. 360 pages. Price, \$4.00. New York: Henry Schuman, 1951.

One of the most fascinating figures in medieval medical history was Theophrastus Bombastus ab Hohenheim, who gave himself the additional Latin name of Paracelsus—implying that he was a Super-Celsus (Celsus being a famous Roman physician who lived in the first century A.D.) Dr. Pachter has given us an excellent pen-picture of this controversial character, whose unquestioned genius was marred by his arrogance and egotism.

Paracelsus had the unfortunate faculty of arousing resentment wherever he went. Over and over he repeated the cycle of being accepted by a community as a great healer, only to be rejected later, even by those who had first befriended him. He exemplified Seneca's proverb that "there is no great genius without some touch of madness." Throughout his life he manifested paranoid ideas. Toward the end he claimed to have been converted, and certainly for a time became much gentler, and more tolerant, and less dogmatic. There was a brief period when it seemed that his last days would be crowned with honor and glory, but the inevitable paranoid delusions of persecution prevented proper recognition in his lifetime.

After his death his true genius was recognized. As Dr. Pachter points out, he anticipated biochemistry and chemotherapy, the functional conception of physiology, and modern psychiatry. The stormy life of Paracelsus, and his devotion to a passionate search for knowledge, is the basis, according to Dr. Pachter, of the legend of Faust.

The book represents an immense amount of research on the part of Dr. Pachter, and is to be commended to anyone interested in learning more about the intriguing story of Paracelsus.

**A Classified Bibliography of Gerontology and Geriatrics.** By Nathan W. Shock, M.D., Chief, Section on Gerontology, National Heart Institute, National Institutes of Health and Baltimore City Hospitals. 599 pages. Price \$15.00. Stanford, California: Stanford University Press, 1951.

The tremendous increase in the problems of old age and of the aging process is evident from the size of this volume, which is devoted to an exhaustive list of the literature on the subject. In its 599 pages 18,036 references are given. Some of these are duplications, since they fall into more than one classification; but even so, their number is really enormous.

As the title indicates, the references are classified for the sake of convenience. The book is a treasure house of information on every phase of aging and old age. It was made possible by a grant from the Forest Park Foundation, and, as stated in the preface, "represents the cooperative efforts of Stanford University, the Section on Gerontology (U. S. Public Health Service), and the Foundation." While it can never become a best seller, it will prove of great value to those interested in the literature dealing with the problems of old age.

**When Minds Go Wrong.** By John Maurice Grimes, M.D., four years a staff member of the Council on Medical Education and Hospitals of the American Medical Association; author of "Institutional Care of Mental Patients in the United States." 237 pages. Published and distributed by the author, 5209 S. Harper Avenue, Chicago 15, Illinois.

This book is a blistering indictment of the conduct of state hospitals for mental disease. No particular state is singled out, but the blanket charge is made that they are all under political control; that the patients in them get only custodial care; that most of the treatment is carried out by the attendants who only too often are brutal and domineering; that the staff doctors have very little actual authority in the treatment of the patients in the hospitals; and that most patients kept in hospitals really should be discharged and allowed to take their place in society.

In the letter that came with the review copy of the book, Dr. Grimes states that he is offering it to every psychiatrist in America, in the hope that they may be stimulated to do something constructive toward a complete reorganization of the system of state hospitals for the care of the mentally ill. The book is worthy of careful reading and pondering, for there is an uncomfortable amount of truth in it.

**Pathology in General Surgery.** By Paul W. Schafer, M.D. 581 pages. Price, \$17.50. Chicago, Illinois: The University of Chicago Press, 1950.

This book provides an attractive means by which the general surgeon may correlate the clinical diagnosis and treatment with the pathology involved in the cases under his care. Arranged in a systematic fashion by organ systems, a brief discussion of the clinical aspects as well as the fundamental pathology of general surgical disease is presented. The scope of these discussions is extended by a pertinent bibliography accompanying each section of the book.

Perhaps the greatest asset of this work is the inclusion of magnificent color illustrations of the gross and microscopic characteristics of various disease entities, emphasized and complemented, where indicated, with roentgenograms. Its greatest appeal is naturally to the general surgeon, but the medical student and house officer will find it a ready reference for the pathology of general surgical disease.

## Classified Advertisement

### ANNOUNCING THE OPENING OF A MANUSCRIPT CLINIC

**SERVICES:** Medical papers edited, re-organized, or rewritten; references checked and completed; tables arranged; manuscripts retyped.

**DIRECTOR:** Mrs. E. W. Jackson, assistant editor of the NORTH CAROLINA MEDICAL JOURNAL, 1940-1950.

**ADDRESS:** 428 Stratford Road, Winston-Salem 5, North Carolina.

**RATES AND REFERENCES** given on request.

## BULLETIN BOARD

(CONTINUED FROM PAGE 165)

### Army Selects Students For Military Intern Program

Appointment of 132 senior medical students for the military intern program of the Army Medical Service was announced recently by Major General R. W. Bliss, Army Surgeon General.

This program provides that medical students, upon graduation, can be commissioned in the Medical Corps Reserve and serve their internship in an Army hospital with the pay and allowances of a first lieutenant. For the first time since World War II, new doctors are required to serve one year on active duty in addition to the year of internship.

Selections are made on a competitive basis from senior students in seventy-two medical schools approved by the Army Surgeon General. This year 518 applications were received and appointments were divided among fifty-two schools.

Of the 132 new medical appointees, thirty-seven currently hold reserve commissions in other arms of the Army other than Medical, some as high as the grade of major. All start their internship as first lieutenants in the Army Medical Corps Reserve.

The following students from North Carolina received appointments: Andrew A. Best of Route 1, Kingston, Meharry Medical College; Nicholas V. Parapid of Route 1, Salisbury, Duke University; Harold L. Williams of 1601 Dickinson Avenue, Greenville, Duke University; Louis H. Williams of 1601 Dickinson Avenue, Greenville, Duke University; Arthur W. Yount of 712 North Center Street, Statesville, Bowman Gray.

\* \* \*

### DEPARTMENT OF THE ARMY

#### Forced Feeding Heals Burns Faster, Army Tests Indicate

The healing of serious burns is accelerated through a system of high caloric feeding now being tested by Army doctors, Major General R. W. Bliss, Army Surgeon General, reported recently. Testing of the system, involving a new electric pump and new principles of nutrition, was started recently at Brooke Army Hospital, Fort Sam Houston, Texas.

Many extreme or extensive burns, especially if they have become infected, result in a toxic, depleted state in which the patient loses considerable weight and strength, and suffers severe loss of appetite, General Bliss explained.

Under the Army's treatment program, a liquid diet very rich in energy is fed through a very small plastic tube inserted through the nose directly into the stomach. The food is carried to the stomach by means of the pump devised by Dr. Truman G. Blocker, staff surgeon of the University of Texas Medical School at Galveston, and a surgical consultant to the Army Medical Service.

High caloric feeding is one of several phases of thermal burn research being carried on by the Army at Brooke under Lieutenant Colonel Edwin J. Pulaski, M.C. As results are obtained, the findings have been and will continue to be reported to the civilian medical profession.

\* \* \*

#### Civilian Consultants Aid Army Medical Program

Three prominent civilian physicians have accepted appointments to committees of the Society of United States Medical Consultants in World War II, which will assist in providing medical consultation of the highest order to the Army Medical Service, both in the United States and overseas. The committees were appointed at a meeting of the

society's advisory board in the office of Major General R. W. Bliss, Army Surgeon General, recently.

Heading the committee, which will concentrate on advising on assignment of consultants for Army hospitals in the United States, is Dr. Joseph M. Hayman, Jr., specialist in internal medicine, of Cleveland, Ohio. The overseas committee chairman is Dr. Alfred R. Shands, orthopedic surgeon of Wilmington, Delaware. The only other doctor so far appointed is Dr. John B. Flick, of Philadelphia, Pennsylvania, who will fill the general surgery position on the overseas committee.

Still to be named are a neuropsychiatrist and a general surgeon for the Zone of Interior committee, and an internist and a neuropsychiatrist for the overseas committee.

The aim of the Zone of Interior committee will be to assure that every Army hospital in the United States will have available within a reasonable distance consultant skills which can be called upon as needed. Under the overseas program, outstanding American physicians are sent abroad to visit the European and Far East Commands and the Panama Canal Zone as representatives of the Surgeon General.

### VETERANS ADMINISTRATION

Nearly 600,000 disabled World War II veterans—among them many who lost their sight or limbs in combat—are being given a chance to make their own way in life through Public Law 16, the Vocational Rehabilitation Act. Through it, disabled veterans are enabled to train at Government expense for jobs they can hold despite their handicaps.

Of all the veterans who have trained under Public Law 16 during the past eight years, nearly half, or 250,000, already have been rehabilitated to the point that they are now able to earn livings as trained workers, the Veterans Administration reports.

Public Law 16 expires for World War II veterans on July 25, 1956. Late in 1950, the benefits of the law were extended to many veterans disabled since fighting started in Korea. The deadline for them is nine years from the end of the current emergency—a date yet to be set.

### Education for Life

That education has two objects is admitted. Training for a living, or put more nobly and truly, training for service and citizenship is one aim; the other is training for a life. Man can not live by bread alone. Our profession has always kept this ideal before it—that the care of the body is no more important than the care of the soul. How futile to preserve life if it can not be made abundant! And what end is served by making a living when one has gained it? Our boasted increase in longevity has accentuated the need of an answer. Very many of the problems of geriatrics would be solved by the solace of the humanities.—Van Wyck, H. B.: *The Role of the Humanities in Medical Education*, Canad. M.A.J. 64: 254 (March) 1951.

The patient with tuberculosis must cure himself. The final conquest or destruction of the tubercle bacilli is a victory of the body itself. Physicians guide and assist the resisting forces of the diseased body against the rapid multiplication and spread of the invading germs. The general measures of rest and good nutrition remain basic in the treatment. Calif. Med., John H. Skavlem, M.D., December, 1950.



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## PRESIDENT'S ADDRESS

### YOUR BUSINESS AND MINE

ROSCOE D. McMILLAN, M.D.

RED SPRINGS

When Sir William Osler, the eminent physician, was a very young man, he came across a passage written by Thomas Carlyle. It colored his whole way of life, and he liked to share it with other men of medicine. "Our main business," said Carlyle, "is not to see what lies dimly at a distance, but to do what lies clearly at hand."

This is not a time when we can afford to stop and contemplate for long what lies dimly at a distance. If we did, we might become paralyzed with fear and concern. Many men hold out a dark prospect for both the nation and civilization. To me it is gravely wrong to join with the pessimists. We may be realistic about some of the problems we face, but if we seize the moment to do what we can about those problems, we have a right—as persons who think logically and scientifically, as well as men of faith—to believe that legitimate victory is at least a possibility.

What are some of the items of the moment which deserve our attention as members of the medical profession in North Carolina? You may have your own ideas. As your president, in daily contact with medical affairs and constantly concerned about its problems, I should like to present to you simply my own ideas about matters of the moment meriting our concentration.

#### *A Right Climate for the Right Kind of Medicine*

*We need to foster, in our profession and in society as a whole, less dependence upon Great Government, and more dependence upon individual imagination and initiative.*

Because men have forfeited the initiative and community concern which they showed

in the pioneering days of this nation, Government has "taken over." Whenever a job has seemed to be too much for a handful of us, or a profession, or a state, we have passed the buck to Government. Today, we see people who think that only the government can do it, and who are complacently allowing the government to do it.

Thoughtful men realize that Big Government does not mean Strong Government. We need Strong Government to cope with the mighty problems of the day, but Big Government *can* become the means of weakening the nation at a crucial moment. It *will* become that if it continues to pyramid and acquire layers of costly administration; if it continues to divert billions of dollars needed for production, first into taxes, then into subsidies to be given away; if it continues to think financial gain and economic profit are sinister; if it tends increasingly toward regulation of business enterprises and boldly designs attack upon the medical profession.

The only way in which we can halt the growth of Big Government, which could control us body and soul and weaken us for rugged responsibilities and for real service, is to use our own imagination and energies to develop and carry out our own plans right at home—right in North Carolina; and to join with the other forces beginning to educate and stimulate all people, on all levels, from the grass-roots to the top, to look at their problems frankly and to work out their own solutions to them. A surge of such creative activity, a recapturing of the old pioneering courage and initiative, would automatically place Government in its proper perspective and the threat of socialism, or any other paralyzing brand of control, would diminish. A finer type of medicine will continue to

emerge as the emphasis upon the individual becomes more important. Strong, free, creative individuals will build and hold democracy; and a true democracy will permit true medicine to flourish unhampered and uncontrolled.

### *Doctors Must Accept Their Role as Citizens*

*As our awareness of what is happening around us increases, it is your business and mine to become willing, as citizens as well as doctors, to take off our gloves and get into the political arena.*

This doesn't mean that doctors must run for office. It does mean that doctors must devote some time, effort, and money toward the support of candidates who stand for strong, clean government—not for fat, mushrooming, dictating Big Government. I am not pleading that we do anything for an individual by the name of Smith, Jones, or Brown who may be a member of Congress, but I am pleading that we see that the thinking persons of the right type are elected to the halls of Congress, and to all other positions of government—from county constable on up. We have got to do more than merely state opposition to such proposed legislation as compulsory health insurance, or to such governmental trends as socialism. We've got to encourage independent, honest men to run for office. We've got to rally support for them among all whom we meet. We've got to contribute to their campaign funds. Finally, we have got to go to the polls and vote for them. This is going to take some of our time. But it will be worth it if we can help preserve the American way of life and the American way of medicine.

### *Bolstering the Voluntary Insurance Plan*

*In line with our recommendation that people work out their own solutions and pay, insofar as possible, for their own benefits, it is your business and mine to press harder for support of voluntary health insurance.*

The dynamic growth of voluntary group coverage in the last decade is a striking example of social progress stemming from the grass roots. It is an effective answer to arguments for federally administered socialized medicine. If voluntary health insurance continues to spread at its current rate, or faster, we can expect that it will eventually blanket our population.

For people who cannot afford even the modest premiums of the voluntary plans, doctors are participating in free clinics and offering their services in public hospitals. It is in the middle group of people, between those of high and low income, that the medical care financing problem is so acute. It is among these citizens that we need to stress the importance of preparing intelligently for medical emergencies. We should work to make voluntary health insurance more attractive to them. And we ought to plan with them ways of stimulating broader purchase. Particularly is this true in the rural areas. We doctors must remember that voluntary health insurance is *not for the doctors* but *for the people*. We will gain more friends for voluntary insurance with this approach.

### *Enriching Medical Education*

*In order to strengthen the whole cause of medicine, it is your business and mine to work more diligently in behalf of improved medical education—education which does not lean upon government for its support.*

In medicine, as in all other professions, the quality of the performance of its members is governed more by the quality of their professional training than by any other single factor. Fortunately, for its own honor and for the public interest, medicine realizes that it must maintain an effective program for promoting high educational standards in all phases of medical education. However, there is always more than we can do in the light of the swiftness with which science is moving.

I must oppose federal aid to medical education. More investment by the government in medical training would give the government more right to interfere with the processes of medical education—and that we cannot believe is sound, for it would move us nearer to the control from which we shrink.

However, I am well aware of the financial problems faced by medical schools; the cost of training doctors has almost doubled within the decade, while income from endowments has been cut in half. Furthermore many of the more recent donations to medical schools have had strings attached: the money is earmarked for the study of cancer, polio, arthritis, or some other restricted and specialized subject.

My recommendation for alleviating the





ROSCOE D. McMILLAN, M.D.

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financial plight would be that we join together to encourage medical contributions from private business and private philanthropy, and that we give as freely of our own means as we can. Further, in our solicitation of funds for our schools, we need to emphasize that the money donated must not go for isolated research and concentrations, but for over-all medical school development; for adequate staffs and facilities to teach and train a new generation of doctors. Both these points are in line with a move made recently by the American Medical Association, which gave \$500,000 as a nucleus for the American Medical Education Foundation, to be allocated to medical schools for use as the schools deem wise. This initial sum must be augmented by gifts from many individuals, groups, societies, and organizations to strengthen, expand, modernize, and enrich the seventy-nine approved medical schools of this country.

We are proud of, and will continue to support, our two endowed medical schools—Duke University and the Bowman Gray School of Medicine of Wake Forest College. They have helped place North Carolina in the limelight with regard to medical education.

We are proud, also, of the expanded medical school of the University of North Carolina, which is now rising and is a part of the whole Medical Care Program—a program this Society did so much to make a reality. Regardless of what schools we have attended, we should look upon this new institution as added opportunity for all the people within this state to be well served medically. With our unqualified support, financial and moral, the University's medical school may become the keystone of the entire Medical Care Program in North Carolina. I commend to you strong backing of the Medical Foundation, upon which the life and usefulness of the new school is so dependent. Your interest and your help are needed now.

Should we need inspiration for such support, we may look to our colleagues in the dental profession. It is my understanding that one hundred per cent of the Dental Society's membership expects to contribute to the new dental school. A similar spirit among us can help to erect at the University one of the great medical institutions of the world.

*government and better institutions, it is your business and mine to keep in focus the possibility of pending war and emergency, and to direct a part of our efforts toward preparing the state for such an eventuality.*

If, despite all our attempts to forestall it, war should come, the American people are sure to experience biologic, chemical and atomic attack. Unfortunately, the lights of perverted science, to which Mr. Winston Churchill referred in 1940, are not dimmed. If anything, they have increased in intensity to the point that our great civilian population, rather than our armies in the field, have become the potential target for a relentless enemy.

There is a critical need for effective leadership in the nationwide civil defense program. As citizens, we need to help stimulate it; and we need to demand that honest facts be presented to the people of America so that they may act intelligently upon them.

As members of the medical profession, we know that our role in a war emergency will be major, here at home as well as in the services. We need to join with all other social agencies and organizations in our communities in planning for civilian defense. Where communities have taken no initiative in planning for emergencies, doctors should help to wake the citizenry and lead the way. Permit me to say here that the Medical Society of North Carolina has taken admirable initiative in statewide planning for civil defense medical care. The distinguished work that has already been done by the Committee on Emergency Medical Service has attracted national comment. It behooves the entire profession in the state to put teeth in these plans, and to help gird North Carolina for what may come. The degree to which we plan and prepare will be the degree to which we may salvage the nation if war occurs.

I should like to interpose the thought that civil defense offers peculiar opportunities to put fiber into our democracy as well as to prepare us for emergencies. Wherever citizens come together to plan for the protection and well-being of community and nation, they are practicing democracy—and nothing so strengthens democracy as practicing it, under any and all circumstances.

#### *Selling Ourselves Positively*

*No matter how noble we conceive our profession to be, it is your business and mine to sell ourselves to the people, not only through*

*Alertness to Prepare for Emergency  
At the same time that we work for a better*

*our service, but also through all our professional approaches.*

Through two of our committees, with employed personnel, as well as through our ably run executive office, I consider that we are communicating positively the aims of the Society and the profession as a whole.

In public relations, it would seem to me that this particular and important phase of Society activity has taken form rather effectively, has already shown definite results, and will increasingly bring prestige and honor to the Society itself.

The program has been pitched on a very high plane, a position in keeping with the dignity and intelligence of the doctors of this state. It has attempted to create or cement understanding and a mutually helpful relationship between the medical profession and the public at large. We sincerely believe that medicine has more friends today because of the guiding hand of this department.

Its premise has been that every activity of the Medical Society, either directly or indirectly, affects the public relations of medicine.

Its goal has been, and still is, the stimulation of individual thinking, to the end that people will agree with the medical profession that the American system of the private practice of medicine is much better for the *public* interest than any type of compulsory system, whether state or national.

It has been a source of deep satisfaction to me to note that the public relations activities have, by design, been geared to a gradual growth rather than inflicting a bombastic attack on the sensibilities of the populace of our state, regardless of the merits or demerits of the program. It is further gratifying to me to note that in this gradual growth, a firm foundation of wholesome understanding on the part of our people has been created. Many of us too often think that the reaper should be attached to the plow. Too few of us realize that the soil must be prepared, the seed must be sown, and then the harvest reaped.

When I look at the objectives of our public relations program, many of which are but a continuation of the past year's activities, I can readily believe that the life and practice of each member of the State Society has been benefited, if not made immeasurably more pleasant. All this, to my mind, can do but one thing, and that is to project pleasantly,

intelligently, and acceptably medicine's mission to the one group we have vowed forever to serve—the public.

Our Rural Health Committee is serving us well from many standpoints: It is helping to interpret medical problems to the laity and encouraging the laity to make more intelligent use of medical resources; indirectly, it is aiding other committees of our Society with such concerns as maternal welfare, cancer, insurance, medical care problems, building hospitals, and public health; it is strengthening our public relations with many state agencies and organizations; it is introducing doctors to more community action groups, and community groups to us.

The Rural Health Program is stimulating people to think for themselves. It is not holding out answers to people; it is demonstrating faith in what people can accomplish if they will come together to thresh out their common problems. Doctors in all the counties where the Rural Health Program has functioned have been eager to serve. As they have served, they have spread a new type of goodwill for the profession and the Society. I commend the Committee and its program for helping to translate into action our ideas on what constitutes the truly American way of getting things done. The vital and wholesome approach which it advocates cannot help but increase our stature as individuals, as members of a profession, and as citizens of America.

### *The Need for Unity*

In closing, I should like to leave with you my conviction—and I believe it is yours—that *we must present a strong, unified front to the world*. Without that united front, all our efforts in behalf of democracy, good men in government, a broader span for voluntary health insurance, better medical education, dependable emergency medical care, and public relations with depth, are futile.

It is possible, even wholesome, for us to disagree and to discuss among ourselves; by considering all sides of a question, we may arrive at a solution that is honest and fair. But just as a family may disagree in the bosom of the home yet stand together before the world, so we, as a medical family, must stand together as we work for the common goals of better health and lasting freedom. Petty personal differences must fall before our duty and our opportunity.



These points that I have outlined to you constitute, in my mind, the main business of the moment—your business and mine. If we handle it wisely and thoroughly, as becomes our profession, it seems to me that we—along with everyone else in America who is really working to fortify democracy—are entitled to some degree of hope for the future, in the dim distance. Determined, patient, faithful, and trustful of God's help, we shall achieve a profession, and help to forge a nation, worthy of the blessings with which both are already endowed, and worthy of the great responsibilities which a whole world has placed upon us.

## SCHOOL PSYCHOLOGIC CLINICS PART I: PRELIMINARY REPORT

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There is a tremendous need for special facilities for the evaluation and guidance of children who are a problem in school, whether their trouble be failure in a specific subject, general lack of progress, or a behavior disorder. This paper is primarily concerned with the value of school psychologic clinics. The purpose of such a program, with special reference to preschool children whose success in school work may be predicted by various testing devices, will be presented in a second paper. The results of the work performed in these centers will appear in detailed form as a final report.

The psychologic program, as an organized service in our public schools, is a comparatively recent development. School administrators and teachers are becoming more and more convinced that a psychologic program can contribute much to the adjustment of children. It focuses attention on the individual differences and needs of pupils, and helps to interpret these needs and problems to the teachers, the parents, and to the child himself. By learning how to use the information obtained through psychologic studies, the school staff is able to do its job more

effectively. Thus, it helps the child to become better adjusted socially, mentally, and vocationally.

### *Organization and Personnel*

School psychologic clinics vary widely in their organization and in the services they perform. They range from a simple program conducted by a single school psychologist to a highly organized clinic, with a staff of specialists. A full clinic team is composed of clinical psychologists, psychiatrists, social workers, speech therapists, and reading therapists, each concentrating on his particular field of specialization. No specialist works independently of other clinic members; rather, the findings of all specialists are coordinated into a picture of the total child.

The psychologist is primarily responsible for evaluating, by means of highly specialized tests, the child's intellectual maturity, his mental weaknesses and strengths, special defects, interests, and emotional problems. The psychologist makes recommendations concerning correct grade placement, the maximum level of achievement in school, special defects which interfere with school work, and the course of action necessary to correct existing defects or deficiencies. In addition to the diagnostic study, treatment is carried on with selected cases.

The speech and reading therapists devote their time to children with specific defects who can benefit from remedial therapy. Speech and reading defects which stem from emotional problems are handled by the psychologists or the psychiatrists of the clinic.

The psychiatrist devotes his time to those children who manifest serious nervous or mental disorders. His function is primarily therapeutic.

The social worker is a vital link in the clinic team. She provides the liaison between the clinic, the school, and the home. She visits the home prior to the child's clinic visit, interprets the purpose of the visit, and obtains a detailed social history of the child. Later she visits the home in order to help the parents carry through remedial measures. She also visits the school, to interpret the findings and recommendations of the clinic to the school staff, and to assist in carrying through suggested therapeutic measures. In many cases, readjustment of the school curriculum or policies to conform with the

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child's assets or limitations, rather than active therapy, is indicated.

### *The Concept of Individual Differences*

The study of individual differences has taught us that no two individuals react in the same manner to identical situations. It is apparent that no two individuals develop at exactly the same rate, a fact that people generally can recognize and accept. Not so with mental development, which also proceeds at different rates in different individuals. Furthermore, many people refuse to recognize individual differences in mental development. Until fairly recently even our schools did not accept this concept. Children of identical ages were expected to perform uniformly well, and if one child lagged behind, he was blamed for lack of effort or interest. The more progressive schools, however, are well aware of the differences between children in their rate of mental development, and adjust the school curriculum accordingly.

If individual differences did not exist, we could expect all children of identical age levels to profit equally well from school work. The failure or success of the pupils would then be in direct proportion to the skills and abilities of the teachers. Regardless of how skillfully a teacher may present a subject, however, success is impossible if her pupils have not reached the level of mental maturity required to master the work.

### *Barriers to Learning*

Psychologists have studied the underlying causes of emotional and intellectual maladjustment, and have devised helpful procedures for determining the causes of inadequate performance and behavior. The major causes of academic failures may be grouped under the following headings: (1) physical handicaps, (2) intellectual inadequacy, (3) emotional interference, and (4) specific disabilities.

#### *Physical Handicaps*

Children who are blind or deaf, partially blind, or hard of hearing require special educational programs adapted to their needs. Since they definitely cannot be taught effectively with normal children, public funds have been used to provide special schools for these children. Although minor visual and auditory defects often go unnoticed for years, they may, in the meantime, seriously

interfere with the child's progress in school, resulting in poor marks, failure, and emotional frustration.

These problems are easily solved by early recognition of the defects through physical examinations, followed by a specific remedial program. Even the teacher may help to discover the defect. Unsatisfactory performance in a pupil should cause the teacher to look for possible causes. Periodic physical examinations of school children are important, and may eliminate some of the causes of school failure.

Many progressive schools have sight conservation classes, hearing conservation classes, and special facilities for aiding children with defects of coordination. In addition, special schools for children with organic brain defects have been established. In these schools, highly trained teachers can produce excellent results with children who could not profit from the ordinary school program.

Acute illnesses of short duration may so alter a child's relation to school and study that his level of achievement is lowered. Some children are frequently absent from school as the result of one illness after another. Such absences are especially harmful in the first, second, and third grades, when the child is learning the fundamentals of reading and arithmetic. Even an intelligent child who has missed some of the basic principles may be confused and unable to get along in his grade without special assistance.

### *Intellectual Inadequacy*

Through research psychologists have determined the levels of development necessary for satisfactory performance in each grammar school grade. These levels are not based upon the amount of *knowledge* a child has acquired in the home and associated environment, but on the *level of development of intellectual traits* such as reasoning, memory, and speed of learning.

It is too often taken for granted that a child of six can satisfactorily do school work because he has reached the chronologic age at which school work should be possible. Unless the intellectual capacities necessary for first grade work have been developed, however, he will fail miserably, not from any fault of his own, but because he lacks the necessary mental equipment. When a child attains the mental maturity required to perform certain functions, he will do so successfully. On the other hand, one whose mental



development is equivalent to that of a three year old cannot be expected to succeed in first grade work, no matter what his chronologic age may be.

The levels of mental development necessary for success in the grammar grades have been determined as follows:

First grade.....	Mental age of 6 years and 6 months
Second grade.....	Mental age of 7 years and 6 months
Third grade.....	Mental age of 8 years and 6 months
Fourth grade.....	Mental age of 9 years and 6 months
Fifth grade.....	Mental age of 10 years and 6 months
Sixth grade.....	Mental age of 11 years and 6 months
Seventh grade.....	Mental age of 12 yrs. and 6 months
Eighth grade.....	Mental age of 13 years and 6 months

Obviously, there are some variations between individuals. While a child with a mental age of 6 might get through the first grade with considerable effort, the work would be much easier and accomplishment greater if school entrance were delayed a while. The preceding levels indicate the capacity to succeed without great difficulty.

Levels of maximum achievement have also been established, so that parents and teachers can wisely guide children and adjust their expectations to conform to the child's potentialities. The following chart gives the approximate expectations for children of various levels of intelligence.

Intelligence Quotient	Expected Maximum Grade Attainment
60 to 65.....	About fifth grade
65 to 79.....	About eighth grade
80 to 84.....	About ninth grade
85 to 95.....	May graduate from high school
95 to 105.....	Should graduate from high school
115 plus.....	May go to college

The rate of progress expected in children of various I.Q. ratings is as follows:

Intelligence Quotient	
80 to 84.....	Usually two years behind schedule
85 to 95.....	Usually one year behind schedule
95 to 105.....	Usually normal school progress
120 plus.....	Usually two years ahead

With this scale as a guide, it is possible to recognize a child's potentialities and thereby to guide him wisely to his maximum level of achievement. More important, knowledge of a child's limitations should prevent parents from demanding achievements beyond his capacity. This in itself will prevent the development of many emotional problems.

In an intellectual evaluation each child is examined, and his reactions are carefully analyzed and interpreted. It cannot be over-emphasized that the purpose of an intellectual evaluation is not to find out how much a child knows but rather to determine his *level of mental development*. This can be done only by an individual examination at the

hands of a skilled examiner, who is able to evaluate the child's reactions and emotional attitudes.

Most children are somewhat anxious prior to an examination of any sort. The first task of the psychologic examiner is to become acquainted with the child and to establish rapport. If the child is emotionally disturbed and extremely anxious, or if there are other factors present which prevent a reliable examination, the entire period may be spent in gaining his confidence. Occasionally, a child must be seen several times before an examination is completed. During the examination the examiner is alert to any changes in mood which may interfere with effective performance. Fortunately, the examination material is so constructed that it holds the child's interest exceptionally well.

The group test is a cold-blooded instrument which fails to take into account individual reactions to the test. It yields a score but cannot reveal whether or not the score is reliable. Furthermore, it measures only a limited aspect of a child's intelligence. A low score on a group test indicates the need of further study to determine whether intelligence, emotions, special defects, or associated factors are involved. Group tests serve chiefly as rough screening devices, and no recommendations should be made merely on the basis of a low score, since it has been proved that only 60 per cent of the children who score low on such tests achieve low ratings when examined individually<sup>(1)</sup>.

### *Emotional Interference*

#### *Undesirable parental influences*

Academic accomplishments depend only in part upon good physical health and intelligence. Many children enter school after five or six years of exposure to parental influences which include the imperative teaching of nursery rhymes, the alphabet, and simple arithmetic. It is known that pressure creates in the child a negative attitude toward whatever he is made to do. For example, forced feedings almost invariably result in problems of eating.

A child whose early learning has been made unpleasant by coercion is likely to develop a strong aversion to learning. Many parents and teachers believe that they can force their children to learn. While it is true that most children do not like to study or to conform, coercion only causes resistance. It is possible to teach a child in spite of his

resistance, but he will learn little. Intelligent guidance, on the other hand, develops in children an inner desire to learn.

Many parents continue their arbitrary methods after the child has entered school. They "help" him with his homework, and all but do it for him. The result is that, besides learning to dislike his homework, the child has no opportunity to develop independent habits of work, and consequently is at a disadvantage when the parents decide to "leave him alone."

#### *Excessive ambition*

Sometimes not even intense eagerness to learn is rewarded by achievement. There are pupils so anxious for success that their very anxiety inhibits their learning. These are usually obsessive children who, under the impact of excessive demands for precision and excellence, have set their standards too high. They do their work over and over, and strive for the highest marks, but are never satisfied with the results. Despite adequate preparation, they are excited, tense, anxious, and apprehensive before every test. The most frequent complaint that teachers have to make of these children is that they do not complete their assignments on time. The same parents who in the earlier years drive their children to obsessive perfectionism, cannot understand their excessive ambition later on.

#### *Extracurricular demands*

Some children are so overburdened by attempts of the parents and others to pump them full of culture that they have no time for adequate relaxation. Religious education, music lessons, music practice, dancing lessons, and dramatics crowd the child's day, in addition to his regular school routine. The constant rush to catch street cars or buses keeps him under perpetual strain and fatigue. This condition is not conducive to effective learning. Sometimes responsibilities around the house have the same effect as cultural demands. Extracurricular activities are worth while only when the child shows interest in and can benefit from the additional training.

#### *Home problems*

Frequently, temporary dips in academic performance can be brought about by a child's preoccupation with family problems, such as the illness or death of a member of the family, parental discussions, parental

alcoholism, or the knowledge that a sibling rival has the mother all to himself while the child is at school. Sometimes a teacher's rudeness creates an emotional block and inhibits learning.

#### *Specific Disabilities*

##### *Reading disabilities*

In addition to the intellectual and emotional barriers to scholastic achievement, specific defects may cause failure in school work. Of the greatest importance are defects in reading, since most later work is almost completely dependent on this skill. Often, failure in such subjects as geography and history can be directly traced to difficulty in reading. Reading facility may be acquired at different ages, but eventually all normal children learn to read. Progressive schools offer definite proof that children who begin reading at 7 invariably catch up to, and frequently pass children who commence at 6. Scientific tests indicate that a child's eyes achieve full strength and coordination nearer 7 than 6 years of age. Consequently, forcing a child to read before he is physically and mentally prepared accomplishes little except of a negative nature. More serious defects in reading may appear, moreover, as the result of pressure for reading accomplishment.

Except in the mildest cases, the main symptoms of reading disability are so obvious that it is surprising how infrequently they are recognized by physicians, school teachers, parents, and others.

1. *The reading disability is specific.* The acquisition of skill in reading lags behind other academic achievements. The reading level may not be as high as could be expected on the basis of the child's mental age level. It is of particular interest that numbers and musical notes are often read more easily than words.

2. *There is a marked tendency to reverse letters and words in both reading and writing.* Parents need not be alarmed at "mirror writing" unless it persists beyond the third grade. Letters which are mirror images of each other, such as *b* and *d*, *p* and *q*, and words which can be anagrammatically reversed, such as *no* and *on*, *was* and *saw*, offer special problems. The frequency of this type of defect led to the term "strephosymbolia" (transposing of symbols).

3. *The confusion may include all aspects of reading.* A child may decipher a word easily, but fail to identify it when he meets



it a second time, three or four lines below. The child may read an uncommonly difficult word, yet stumble over a relatively common two letter word. The child may spell words correctly, but be unable to read them, or he may commit the same errors in spelling that he does in writing or reading. He may be good at drawing, at copying whole sentences, and translating printed word symbols into cursive writing, but may find it difficult to write to dictation. It is not uncommon for intelligent older children to substitute words for those which they cannot read. Younger children often look at a picture and make up their own story, pretending to read from the text. The causes of reading disability are numerous and varied, and require expert study and treatment.

### *Speech disabilities*

Defects of speech also require special attention. Obviously, a child who is aware of his speech difficulty will have an emotional reaction, the severity of which will be in proportion to the significance of the disability to the child. Feelings of inferiority, insecurity, and inadequacy may develop. In addition, the child's fear of being called upon to recite before the group may cause him to dislike school. Correction of the defect not only removes the defect but also relieves the associated frustrations.

Reading defects seem to be more important than speech defects as factors in success. A child with a speech defect, other things being equal, can do satisfactory work in school. He can master the subject matter, despite inability to speak adequately. The child with a reading defect, however, may fail miserably particularly in subjects in which reading is a factor. In other words, a fifth grade child with a speech defect will have no trouble in reading and studying his lessons, and can achieve success; whereas a fifth grade child whose reading level is considerably below his grade placement will have difficulty in mastering school work unless someone can read his assignments for him. It is not unusual to find in the higher grades a child without any reading ability whatever. Not only do such children do extremely poor work, but they are usually labeled stupid.

### *Mental defects*

In addition to defects of reading and speech, a child may show a specific intellectual defect despite normal ability in other

respects. Corrective measures may help the child to overcome these defects, or to adjust to them if corrective procedures are unsuccessful.

### *Requirements for Success*

A successful guidance program must be shaped to fit the conditions of the local schools. It must be built carefully over a period of time, and be adequate to meet most student needs. It must include all of the school staff. It must have community backing and access to community resources. Guidance programs, however small or large, are effective means of promoting and safeguarding the mental health of our school children.

### *Typical Cases*

#### *Case 1*

A 14 year old seventh grade pupil was referred to the school clinic to determine the effect of a speech difficulty upon his grades. He had been promoted each year because it was felt that he had adequate ability and should not be penalized for this one particular defect. The Stanford-Binet Scale revealed the intellectual equivalent of an average child of 7 years and 4 months, with an I.Q. of 52. Actually, his mental level indicated less than second grade ability. His intellectual classification was well within the moron range, and indicated the real cause of his scholastic maladjustment. Poor speech merely represented one facet of low intelligence. Emphasis upon nonacademic training was recommended, in view of the reduced stress involved in such a program.

#### *Case 2*

An 18 year old high school student who showed a sudden and extreme drop in grades was referred to the clinic for evaluation. The possibility of mental illness had not been considered. A personality evaluation revealed that the underlying cause of school failure was a frank psychosis, a diagnosis which was substantiated both by the patient's own admissions of hallucinatory and delusional experiences, and by psychiatric examination. He was committed to a state hospital.

#### *Case 3*

A 12 year old boy in the fourth grade was referred to the school clinic to determine the cause of his reading disability. He was found to be of dull-normal intelligence, with an I.Q. of 82 and a mental age of 10½ years. While he was more nearly placed in terms of mental maturity, he nevertheless had not grasped the fundamentals of reading, and scored no higher than first grade on a reading achievement test. This defect had caused increasing difficulty as time passed. Special remedial instruction on an individual basis was indicated. This program was carried out with the cooperation of the first grade teacher, and brought about almost immediate improvement in his work and in his attitude toward school in general.

#### *Case 4*

A 14 year old boy who was grossly misplaced in school was referred to the school clinic. While he was in the seventh grade, psychologic examinations indicated that he possessed ability to begin fourth grade work. Intellectual retardation was indicated

by an I.Q. of 63 and a mental age of 9½ years. As is often the case, this child presented an extreme behavior problem. It was felt that lowered requirements in accordance with his mental development would help to reduce the emotional problems caused, in large part, by his sense of failure.

#### Case 5

A 14 year old girl who had presented a serious behavior problem in school was referred to the clinic. She was in the seventh grade when examined, but was making virtually no progress in school. She was a frequent truant, and had been delinquent on several occasions. Her performance was characteristically on a moronic level. She was found to have an I.Q. of 60 and a mental age of 8½. Obviously this girl's promotions had been based entirely upon her chronologic age. To prevent more serious criminal or delinquent behavior, it seemed advisable to place this child in an institution for defectives, since supervision in the home was ruled out. The controlled environment would offer some opportunity for training geared to her level, and would also serve to prevent further antisocial behavior.

#### Case 6

A child who had entered school before she was 6 years old was referred to the clinic. When first seen, she had attended school for nearly a year without progress. Examination revealed that this girl possessed low-average intelligence and a mental age of 6 years and 4 months—evidence that she was now barely capable of doing first grade work. When she started school, her mental development was inadequate, and inevitably she failed. It was explained that, although she possessed normal intelligence, she had not been ready for school at the time she entered, and that problems might increase if she were not taught the fundamentals of primary grade work. The plan to retain her in the first grade was accepted.

#### Summary

1. The need for school psychologic clinics has been presented.

2. Major causes for academic failure, including physical, intellectual and emotional handicaps, and specific disabilities such as those affecting reading and speech, have been discussed.

3. The need for special classes and schools which can gear school work to a level equal to a child's assets or limitations has been presented.

4. Six cases, typical of those which are frequently referred to these clinics, were presented, along with the results of psychologic examinations and recommendations.

#### Reference

1. Jordan, A. M.: Efficiency of Group Tests of Intelligence in Discovering the Mentally Deficient, *The High School Journal* 31:73-94 (March-April) 1948.

A sanatorium must be an educational institution where the patient is taught and trained how to get well and stay well. Calif. Med., Edward W. Hayes, M.D., December, 1950.

## PREVENTIVE ASPECTS OF PEDIATRIC ALLERGY

CLAUDE A. FRAZIER, M.D.

ASHEVILLE

The prophylactic aspects of allergy include not only prevention of the onset of allergies, but also prophylaxis against exacerbations of existing allergies. Preventive allergy is particularly important in pediatric practice.

#### Diagnosis of Allergies in Children

When a child with allergic tendencies is brought to the physician, a detailed history of all the circumstances surrounding the onset of the allergy should be obtained. It is important to examine the ears, nose, and throat carefully, using the nasopharyngoscope and occasionally the bronchoscope to rule out foreign bodies or lesions in the trachea and bronchi. A lateral soft tissue roentgenogram of the nasopharynx is helpful in determining whether any excessive adenoidal tissue is present, especially after a previous tonsil and adenoid operation (fig. 1).

The performance of skin tests in children requires more time than the same procedure in adults. If the young patient is allowed to watch the tests being done on children who have been tested before, and to talk to these children, his confidence is gained. Only two or three tests are done the first time. The child realizes that there is very little associated pain, and is usually cooperative. Most of the children over 4 or 5 years of age whom I have seen will readily submit to direct skin tests.

Direct skin tests are more reliable than passive transfer tests; but in young infants or children with a great deal of eczema, passive transfers have to be done.

The results of all skin tests must be correlated with the history and other findings. This statement applies particularly to tests with foods. Of a total of 2,500 food tests I surveyed\*, 90 were positive. Only 15 of these positive reactions, however, were found to be clinically significant when correlated with the history, trial and elimination diets.

Read before the Buncombe County Medical Society, Asheville, North Carolina, October, 1950.

\*Percentages or numbers given in this report refer to case reviews of allergic children which I did at the Roosevelt Hospital in New York City. In these children, the onset of symptoms occurred before 6 years of age.





Fig. 1. Lateral soft tissue roentgenogram of the nasopharynx, showing enlargement of the adenoidal tissue.

### *Common Types of Allergens*

#### *Food*

Sensitivity to milk may develop during the neonatal period<sup>(1)</sup> when an allergic infant receives one or more bottles of raw cow's milk during the first two weeks of life, and then is put on the breast entirely. The allergy may not be evidenced until weaning is attempted. The prolonged interval of breast feeding serves as the incubative period which allows sensitization to cow's milk to become established.

During a severe gastrointestinal disturbance an allergic child may manifest sensitivity to a food for which he had complete tolerance prior to his illness. This phenomenon is thought to be due to increased permeability of the intestinal wall, which permits the ready entrance of unchanged protein into the blood stream. Sensitization may also occur when common foods are taken in excess

—milk, egg, and wheat being the chief offenders.

The cravings of the pregnant woman<sup>(1)</sup>, and her excessive indulgence in certain foods may account in part for some cases of food sensitivity in infants, since it is known that antibodies may pass across the placenta to the fetus. Sensitivity so acquired may or may not be temporary. Frazier and Sherman<sup>(2)</sup> obtained blood from allergic women during pregnancy, cord blood, and blood from the children within a year after birth. They were able to show, by passive transfer, that in some cases antibodies to foods and inhalants to which the mother was sensitive were transmitted to the infant. A few of these infants later showed positive skin tests and clinical evidences of sensitivity.

With the idea of preventing allergies in infancy, allergic women are sometimes advised to refrain from overindulgence in egg during pregnancy. Egg is one of the substances which most frequently give a positive skin test in children with infantile eczema, and the onset of eczema occurs when egg is first introduced into the diet.

The prevention and management of food allergies in infants and children involves attention to feeding problems and a knowledge of the numerous foods. Desensitization is usually unsuccessful, and food allergies are best treated by avoidance of the offending article of food. However, no infant or child should be starved or allowed to get into a state of malnutrition because of his allergy. Every effort should be made to prevent sensitization to food in those infants who have a strong family history of allergy. The following general rules for feeding infants with such allergic tendencies, and those infants already definitely allergic, should be observed:

1. For the relief or supplementary formula, allergen-free milk substitutes, such as Mull-Soy or Nutramigen, should be used.
2. Egg, fruit juices, and vitamins obtained from fish oil should be avoided, and the diet should be supplemented with iron and synthetic vitamins, such as Drisdol and Cecon.
3. When a new food is offered, it should be a single food and not a mixture.
4. Each new food should be introduced separately into the infant's diet, and no other new article of food should be introduced for five days. The purpose of this rule is to allow time for sensitization to any particular food to manifest itself.

5. The offending food should be avoided.
6. Only a few foods should be given.
7. Excessive amounts of any food, including milk, should be avoided.
8. All foods given during the first few months of life should be thoroughly cooked.

#### *Inhalants*

Inhalants are substances which reach the body through absorption from the mucous membrane of the nose and respiratory tract. These substances play a large part in asthma, nasal allergy, and hay fever. Desensitization by means of injections can usually be accomplished when the offending allergen is one of the seasonal pollens. Other inhalants give symptoms all the year round, as long as they are in the patient's environment. The most common of those to which the patient can usually be desensitized are: dust, molds, insect emanations, and the epithelium of chickens, dogs, cats, horses, and rabbits. Desensitization is not often successful when the patient is allergic to cotton and kapok seed.

In order to decrease the inhalant factors in an allergic child's environment, dust control measures should be adopted: plastic covers should be used, stuffed furniture should be removed, and pets and stuffed toys should not be allowed. The best toys would be those made of plastic or washable wood.

When an allergic child goes to camp, every effort should be made to select one in an environment which does not expose him to the plants and trees to which he is sensitive. If he is sensitive to poison ivy, he should be given a prophylactic vaccine. It is usually not advisable for him to ride horses.

#### *Bacteria*

Bacteria, viruses, and fungi may produce allergy as well as anaphylaxis. Infections with tubercle bacilli, streptococci, pneumococci and some of the typhoid organisms may produce antibacterial antibodies (shown by immunologic or serologic methods) as well as positive skin tests.

Experiments have shown that some patients acquire an allergy to bacterial protein or to the bacterial toxin, and that while some bacteria (such as toxin-producing organisms, diphtheria and tetanus) tend to stimulate the formation of protective antibodies with a resulting immunity, other bacteria, tubercle bacilli, pneumococci, streptococci, and typhoid bacilli tend to produce allergy.

In our series<sup>(3)</sup>, almost 90 per cent of the

cases of respiratory allergy in children were initiated by an acute upper respiratory infection. In these children exacerbations of asthma or of allergic rhinitis could be produced by the injection of certain organisms isolated from cultures made from the infected focus.

It is important to remember that most cases present a combination of several types of allergies—to bacteria, food, inhalants, and so forth. A child who is allergic to both milk and ragweed may suffer no ill effects from the ingestion of milk until the ragweed season comes along; then milk may bring on an attack of asthma. One child had pruritus vulvae in the ragweed season only, and desensitization to ragweed caused cessation of the itching.

#### *Allergic Manifestations Occurring in Children*

##### *Infantile eczema*

Infantile eczema can be one of the most disconcerting illnesses of childhood. The determination of the cause may be difficult. Although the condition is usually considered to be allergic in origin, other causes have been considered. There is usually a strong family history of allergy, however, and 30 per cent of our asthmatic patients had previously had eczema. Allergens responsible for the eruption may reach the sensitized tissue by ingestion, inhalation, or absorption after direct contact.

In addition to the elimination diet and the feeding rules mentioned earlier, the routine local and general treatment should be employed. In a few severe chronic cases the use of ACTH and cortisone has brought about some improvement. I was able to improve the condition of several infants who had had frequent colds by the administration, in gradually increasing doses, of autogenous vaccine from the infected foci. Twenty per cent of our patients had a positive patch test to dust, and dust desensitization has been used with good results. Other irritating agents—wool, animals, silk, clothing dye, and soap—must be kept from an infant's sensitive skin when an effort is being made to prevent or treat infantile eczema.

Although the results of treatment in most cases are not completely satisfactory, the infant's condition can be improved and, in some cases, cured by treatment. The physician who handles these cases should realize that he is



not only correcting a skin condition, but is trying to minimize later allergies.

### *Nasal allergy*

While we are all aware of the signs of hay fever, the less typical signs of nasal allergy are not so well known. Nasal allergy may start at 2 years of age. These children have the sniffles all the time, and give the impression of having chronic colds. They sneeze frequently at night and in the morning, but their symptoms decrease during the day. There is usually a thin, watery mucoid nasal discharge. Almost all children with chronic nasal allergy develop the habit of rubbing the nose, called the "allergic salute." Children who are chronic nose rubbers, or mouth wrinklers, may be considered allergic until proven otherwise.

A nasal smear for eosinophils is very important in the diagnosis of nasal allergy. If there is a superimposed infection, however, the eosinophils are sometimes hard to find.

Nasal allergy may be due to foods, drugs, inhalants, or bacteria. Typical hay fever is usually due to pollenating plants. No child is too young to take pollen desensitization treatment. Untreated nasal allergy may later lead to asthma, and may cause bony changes in the base of the skull, with narrowing of the arch of the palate (Gothic arch) and depression of the bony prominences of the cheek bones, so that they have a flat appearance. These changes may result in crowding of the incisor teeth, necessitating dental braces. Treatment of the nasal allergy or hay fever should help to prevent asthma and the anatomic changes mentioned.

### *Asthma*

In considering the preventive aspects of asthma, it is important to realize that asthma may develop at almost any age. In our series of asthmatic children<sup>(3)</sup>, the symptoms began during the first two years of life in 50 per cent of the patients, and during the first year in 10 per cent. The most important etiologic factor in these patients was bacterial allergy. This was combined with food allergy in the early years, and with allergy to inhalants later. Ninety per cent of our asthmatic children under 6 years of age had a past history of many upper respiratory infections, and one half of these patients had had pertussis, tracheo-bronchitis, or pneumonia. Almost all

had had a chronic, croupy cough for several years before the onset of asthmatic symptoms.

I do not feel that tonsillectomy, *per se*, will cure or help asthma. In our series, half of the asthmatic patients had had such an operation, without any relief of their asthmatic symptoms, before we saw them. If the tonsils and adenoids are infected, they should be removed completely, and an autogenous vaccine made from them.

While many asthmatic children "outgrow" their allergy, others carry it with them through life, though they may be symptom-free for long periods of time. It is dangerous to temporize when dealing with asthma, for severe complications may result. Some untreated asthmatic children develop emphysema, chest deformities, bronchiectasis, and chronic suppurative bronchitis. More than a third of the asthmatic children in our series were found on the first examination to have a deformity of the chest wall resulting from their asthma.

Often the proper treatment of an asthmatic child is delayed because of an incorrect diagnosis. This is especially true in children under 2 years of age. Asthmatic attacks in infants are often diagnosed as bronchitis or broncho-pneumonia.

While the symptomatic treatment of asthmatic attacks is essential, it should be remembered that each attack may produce progressive, irreversible changes in the lung and chest wall. It is far more important, therefore, to determine the cause of the attacks and attempt to remove it. The prevention of asthmatic attacks and their consequences calls for continued treatment, consisting in the removal of environmental factors, an elimination diet, desensitization to offending allergens, the removal of foci of infection and treatment with autogenous vaccines made from these foci, avoidance of sudden temperature changes and excesses of any kind, plus breathing exercises, vitamins and antibiotics.

Concerning the relation of psychic factors and asthma, I feel that psychic factors, though they may precipitate an asthmatic attack, do not cause asthma. Although we may feel that some children use their allergies to gain attention, and to take advantage of their parents, we must not overlook the fact that an allergy may itself be the cause of a behavior problem. In our clinic we frequently found that allergic children with be-

havior problems became much better adjusted when their allergies were brought under control.

### *Neurologic disorders*

Among the neurologic disorders in children which may be due to allergy are headaches, encephalopathy, neuritis, syncope. Rarely, convulsions are caused by food allergy.

### *Immunization reaction*

Immunization is an important part of pediatric practice, but it can be fraught with danger. It is important to remember that allergic children, sensitive to egg protein, may have a severe reaction from the parenteral introduction of vaccines prepared from cultures grown in chick embryo tissues<sup>(4)</sup>. Such vaccines include those for yellow fever, equine encephalomyelitis, typhus fever, Rocky Mountain spotted fever, and influenza A and B. Deaths from anaphylactic shock which followed the prophylactic injection of influenza vaccines have been reported. Constitutional reactions to tetanus toxoid have also been reported<sup>(5)</sup>.

To prevent immunization reactions, the history of previous immunizations, and reactions from them, should be taken. If the patient has ever had an egg sensitivity, one should be very cautious in giving vaccines grown on egg media. Skin and eye tests with the diluted antigenic material should be done. If they are both positive, the need for immunization should be weighed carefully against the dangers. If it is absolutely necessary, one must proceed with caution.

Allergic children can usually take the diphtheria, tetanus, and pertussis vaccines fairly well if caution is used. It would be better, in children over 6 years of age, to give booster shots of *single* rather than multiple antigens, and to do skin tests with diphtheria toxoid. If the skin test is strongly positive, it may in itself be sufficient to produce immunity.

Smallpox vaccination must not be given to a child during the acute stages of infantile eczema.

In a child allergic to horse serum, an injection of tetanus antitoxin may produce immediate symptoms ranging from hives to anaphylactic shock and death. In non-allergic children serum sickness, characterized by urticaria, fever, and swelling of the joints and glands, may develop a few days after the injection of the serum.

In order to prevent reactions to tetanus antitoxin, allergic children, after skin tests, should be given tetanus toxoid routinely. A history of allergy should be carefully sought in each pediatric patient. It is most important to determine whether attacks of sneezing and wheezing are brought on by being around horses. Such symptoms usually indicate extreme sensitivity to horse serum, and some authorities<sup>(6)</sup> believe that "horse-asthmatics" should not even be tested for hypersensitivity to serum.

When intracutaneous testing with horse serum is done, it is advisable to start with a dilution of 1:100. In patients who have a history of horse sensitivity, however, a still greater dilution should be used, or else a scratch test should be substituted for the intracutaneous test. If negative results are obtained, subsequent tests can be done with less dilute solutions. No more than 0.025 cc. should be injected intradermally for skin tests, even though it is common practice to give 0.1 cc. An ophthalmic test should always be done, as it is probably a more reliable index of sensitivity than an intradermal test. Desensitization based on the reaction to the skin tests can be done if it is necessary for the child to get the antitoxin.

### *Drug reactions*

Drugs produce a variety of allergic reaction in infants and children. Every physician should be familiar with the side effects of the drugs he uses, and should watch for them. Asthma and rhinitis may result from the use of cod liver oil, penicillin, pancreatin, or sulfonamide drugs. Many pills are made with a gum which may cause asthma. Among these crystalloid drugs aspirin is the most frequent cause of asthma, and is probably responsible for the greatest number of anaphylactic deaths. Anaphylactic reactions may also be produced by injections of serum, hormones, insulin, and liver extract. Sulfonamides, when given orally, rarely cause such reactions.

Symptoms of serum sickness may be produced by a great variety of drugs. A common symptom of drug allergy is fever. This has an abrupt onset, most often on the seventh to tenth day, and it may or may not be accompanied by a rash. It usually subsides within two or three days after the drug is discontinued<sup>(7)</sup>. These sulfonamide drugs are the most common cause of drug fever, but iodides, thiouracil, Atabrine, penicillin, and



streptomycin may also be responsible. Patients with drug fever usually recover, but in fatal cases autopsies have revealed vascular and focal lesions.

Cutaneous eruptions are the most common manifestation of drug allergy. Most drugs occasionally produce some form of skin rash. In 2 to 5 per cent of the patients who receive sulfonamides, a morbilliform rash develops between the seventh and the fourteenth days. Topical application of a sulfonamide may give rise to a contact dermatitis, which may persist for a long time. In infants, with eczema, antihistamine ointment may have the same effect. Patients who have been sensitized by the oral use of a sulfonamide drug often have dermatitis following a topical application of the drug, while those who have recovered from contact dermatitis are apt to have local or general recurrences after oral administration of the offending drug.

Other drug reactions of an allergic nature include hepatitis, agranulocytosis, and thrombocytopenia. The duration of the sensitivity varies.

In order to prevent drug allergies, it is important to obtain a careful history of all drugs administered, and of any previous sensitization. Listen to the patient. A child does not have to have other manifestations of allergy, such as asthma or hay fever, to be allergic to a drug. From an allergic standpoint, it is usually safer to administer a drug orally than parenterally. In an effort to determine whether any sensitivity is present, it is sometimes wise to give a drug by mouth before using the parenteral route.

Before any ointment is used on a child, a patch test should be done. If possible, one should use an ointment fairly free from allergy-producing properties, such as vaseline.

There are certain drugs with which one can and should do skin tests, while other drugs are dangerous if used for skin tests. Skin tests should be done before the administration of protein drugs, such as pituitary extract, insulin, serum, liver extract and toxoids, especially if the child has received previous injections of the drug. One should not do skin tests with crystalline drugs, as they are unreliable and, in the case of aspirin, may be dangerous or fatal. If the child is definitely allergic to one drug, a substitute drug may be tried; if the child is sensitive to insulin, another brand or form of insulin may be used. If it is absolutely necessary to use the one drug to which the child is sensitive,

one may try to desensitize him to the drug, then watch for the side reactions and treat them if they occur.

*Avoid Aspirin in an Allergic Child!*

### Conclusion

Although allergy most frequently manifests itself through the respiratory tract, by a cough, sniffles, asthma and hay fever, it is important to recognize the other manifestations of allergy in children, so that treatment may be begun early.

The prophylactic and curative value of such treatment is impressive. If not treated, allergies in children may be complicated with nasal polyps<sup>(8)</sup>, nasal infections, facial and dental deformities, emphysema, bronchiectasis, chest deformities, psychic trauma, and possibly death. Skin allergies may lead to secondary changes, such as keratosis and lichenification.

As our knowledge of immunization is used in pediatrics to prevent infections and their consequences, so can our knowledge of allergy be used to prevent allergies and their consequences in children.

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### Dr. Rusk Wins A.P.M.A. Award

Dr. Howard A. Rusk, director of the Institute of Rehabilitation and Physical Medicine of the New York University—Bellevue Medical Center, has been selected to receive the 1951 Research Award of the American Pharmaceutical Manufacturers' Association, it was recently announced by Dr. Martin Lasersohn, chairman of the Research Board and vice president of Winthrop-Stearns, Inc.

"Dr. Rusk's research has been directly responsible for the rehabilitation to active useful life of many thousands of servicemen who sustained catastrophic injury and crippling, as well as civilians handicapped from accidents and from such paralyzing diseases as poliomyelitis, multiple sclerosis, apoplexy and cerebral palsy," Dr. Lasersohn said.

An associate editor of *The New York Times*, Dr. Rusk now holds the rank of brigadier general in the Air Forces Reserve. He was awarded the Distinguished Service Medal in 1945.

The Research Award of the A.P.M.A. was established in 1947, to be presented "in recognition of the work of an investigator who, during the recent past, has made a significant research contribution in the field of medicine or the medical sciences."

## OPERATIVE PROCEDURE FOR EVISCERATION OF THE EYE

W. P. MCKAY, M.D.  
FAYETTEVILLE

The following modified operative procedure for evisceration of the eye has not, to my knowledge, been described heretofore. If it has, this paper may be considered as a review and a personal endorsement of a method that I have employed in selected cases for about ten years.

Enucleation, with implants of 10 or 12 mm. in Tenon's capsule, provides a sufficiently large and movable stump for a prosthesis with good cosmetic results, and is perhaps the most generally acceptable procedure. There are cases, however, in which I consider modified evisceration of the eye to be preferable.

The objections to evisceration by the ordinary procedure are well known. They have been stated by Wurdmann as follows: "Healing is more severe and protracted than in enucleation . . . The postoperative pain is usually severe and has to be relieved by morphine . . . The stump usually becomes quite small and, as a rule, the trouble, time and pain are not worth the price."<sup>(1)</sup> I would add that particularly with old people, healing after the ordinary evisceration is apt to be a slow and painful process.

It is well known that the removal or evisceration of an eyeball is followed by gradual atrophy of the soft tissues of the orbit, making cosmetic results less and less favorable no matter what procedure is employed. Enucleation or evisceration also arrests the development of an orbit that has not attained adult size. Since this is true, implants in Tenon's capsule, or in the scleral sac, help to obviate shrinkage of the socket, and are therefore preferable in patients up to middle age. With middle-aged and elderly people, however, I prefer modified evisceration for the following reasons: (1) The movable stump is adequate. (2) The shrinkage of orbital tissues in the remaining years is negligible, or at least of less importance from a cosmetic angle than it would be in a younger person. (3) I have not found that there is any more pain than that which follows enucleation. (4) There is less bleeding in elderly

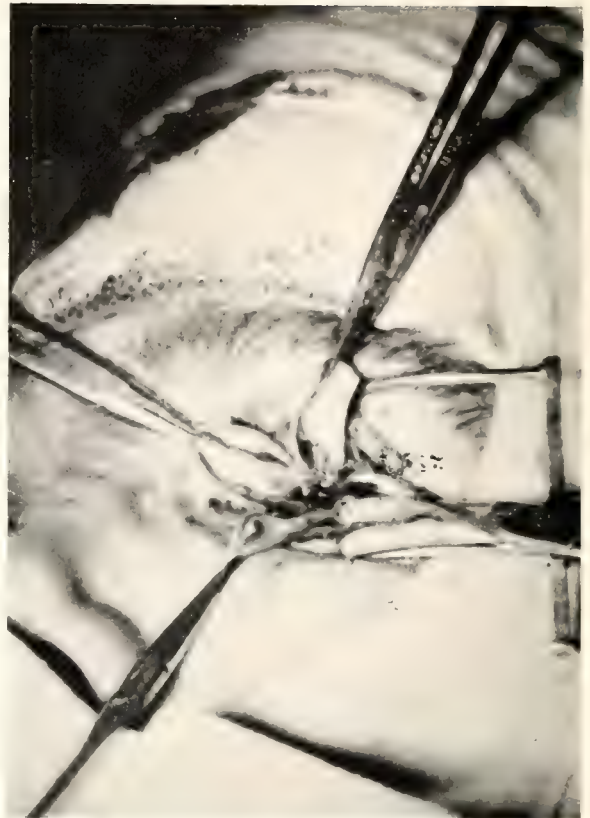


Fig. 1. Scleral sac after slits have been made between recti muscles and before opposing flaps have been overlapped for suturing. Slits permit the seepage of blood from surrounding tissues into the bottom of scleral sac, thus preventing a dry intrascleral surface and probably reducing postoperative pain.

arteriosclerotic patients, and less danger of hematoma and ecchymosis.

### *Description of Technique*

After the cornea has been removed in the usual manner, and the contents of the globe evacuated, a flat elevator is used to separate the scleral sac from Tenon's capsule between the recti muscles. Four slits are then made in the sclera between the recti muscles, extending backward to within 3 or 4 mm. of the posterior pole of the globe, care being taken to avoid severing the oblique muscles (fig. 1). The scleral sac is thus divided into four segments (fig. 2), to each of which is attached a rectus muscle. (It will be observed that when the scleral slits are made, a small amount of blood oozes into the cavity. This seepage apparently is an important factor in the success of the operation.) With double-armed fine catgut, the opposing scleral flaps are overlapped and sutured (figs. 3 and 4), forming, when completed, a movable stump. Tenon's capsule and the conjunctiva are then



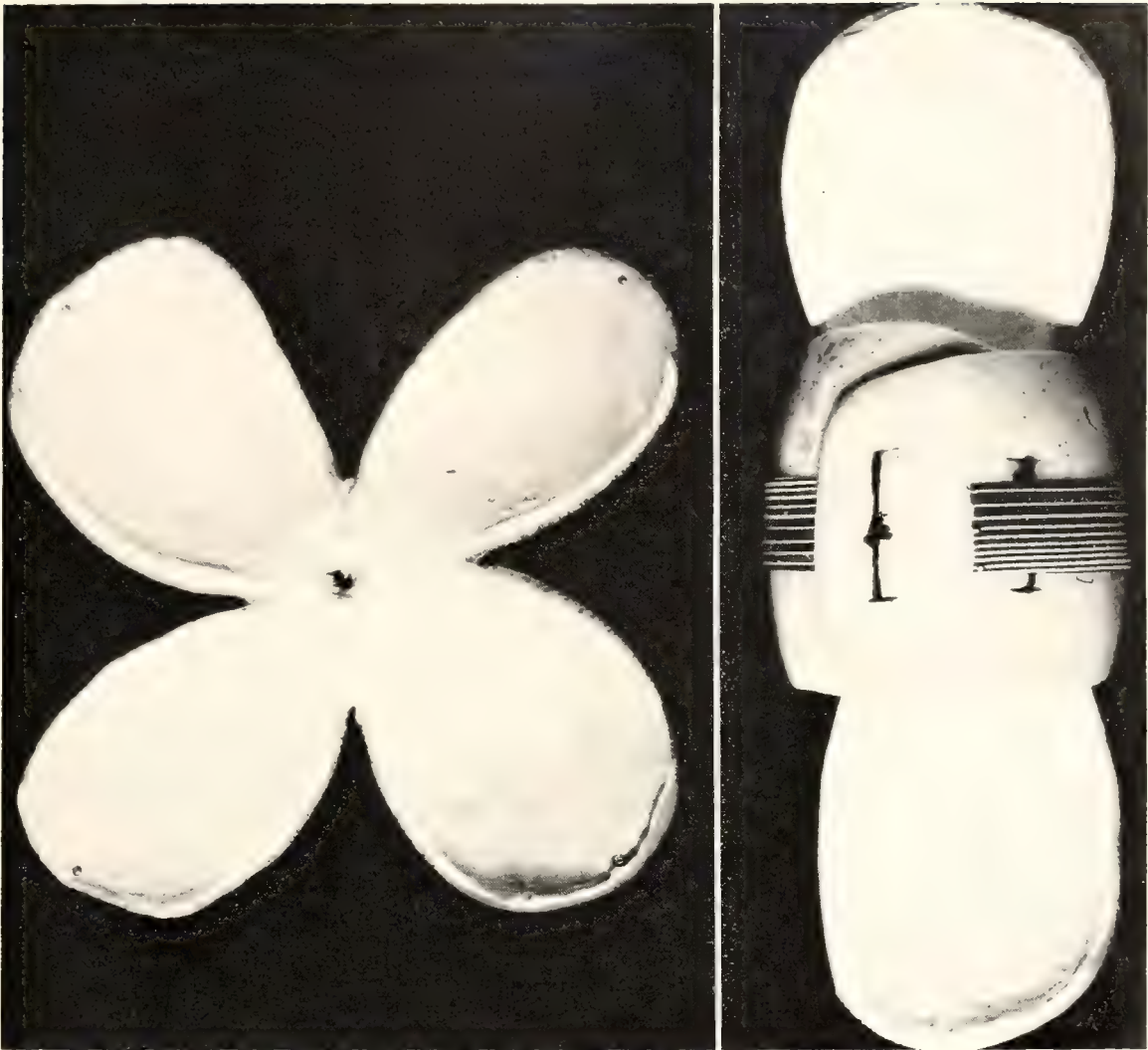


Fig. 2. Scleral sac represented by grapefruit rind, showing the four slits.

Fig. 3. Schematic representation of the first two opposing flaps of sclera overlapped and sutured.

Fig. 4. Schematic representation of second two opposing flaps overlapped and sutured.

closed over the stump with a pursestring suture, preferably of fine catgut.

#### *Conclusion*

I believe that the pain following evisceration of the eye by the usual technique is caused by a dry scleral sac, comparable to the dry socket following a dental extraction, in which pain is often troublesome and prolonged. The modified procedure which I have described obviates the dry scleral sac, and thereby eliminates what is probably the chief cause of postoperative pain.

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## REPORT OF SIXTY CASES OF PTERYGIA REMOVED BY THE KAMEL TECHNIQUE

M. N. LYMBERIS, M.D.

CHARLOTTE

There seem to be as many operations and modifications of operations for pterygium as there are surgeons performing the operations. Through the centuries pterygia have been cauterized, resected, dissected, ligated, coagulated, burned, frozen with carbon dioxide, and transplanted up, down, and sideways.

It is not my purpose to describe a new method of removing pterygia or a modification of someone else's method, but to call attention to a method which has been widely used in Egypt, where pterygia are so common. Before discussing the technique and the results of this technique, it would be well to review a few pertinent points regarding pterygia.

### *Etiology and Pathology*

A true pterygium is a pathologic encroachment of a part of the bulbar conjunctiva, exposed in the palpebral fissure over the cornea. It is now fairly generally accepted that pterygia result from a chronic inflammation of the conjunctiva and the cornea. If the inflammation is confined to the conjunctiva alone, a pinguecula or a conjunctivitis is likely to develop. When the cornea is involved also, a pterygium more often results.

It should be remembered that the conjunctiva and the superficial layers of the cornea are of the same embryonic origin. The inflammatory process in the subconjunctiva leads to hyperplasia and hypertrophy of elastic tissue and deposition of hyalin, which causes elevation of Bowman's membrane and eventually separates it from the epithelium. It is only when the pathologic condition that starts as a localized conjunctivitis becomes a keratoconjunctivitis that a pterygium is formed. As a result of this keratoconjunctivitis, fibrous tissue is laid down in the submucosa of both the conjunctiva and the cornea. As a result of the consequent contraction and shrinkage of the cornea, a fold of conjunctiva encroaches on the cornea, forming the pterygium.

A pterygium is neither a disease of the conjunctiva nor a disease of the cornea. In fact, it is not a disease at all, but only a symptom of an underlying pathologic condition which affects both the conjunctiva and the cornea. To sum up, a pterygium is a mechanical encroachment of a part of the conjunctiva over the cornea, caused by the shrinkage and contraction of radially disposed fibrous tissue bundles laid down in the submucosa of the conjunctiva and in the superficial layers of the cornea, as a result of localized, chronic keratoconjunctivitis.

When one examines a pterygium which has been dissected and sectioned, he will find that the nuclei of the submucosa, for the greater part, have disappeared, and that the connective tissue bundles have become confluent and have a homogeneous pink color indicating a hyaline degeneration. In the deeper parts of this hyaline tissue, degeneration of elastic tissue is seen in the form of dark-staining convoluted fibers. The epithelium over the affected area is thinned. If, then, the true pathologic basis of the pterygium is a shrinkage and degeneration of elastic tissue following chronic inflammation, it seems rather pointless to transplant this tissue in another direction, as if it were a tumor, to grow in that direction. It is important to bear in mind this etiologic-pathologic relationship, for it is on this basis that the technique to be described is founded.

### *Incidence*

It is a well established fact that pterygia occur far more frequently in hot, dry climates than in moist, temperate regions. A map prepared by Dimitry of New Orleans shows that the incidence of pterygia in the United States is far higher in the Southern states than in the Northern and Eastern states; and that the drier the climate, the greater the incidence of pterygia. On a world-wide basis this same general pattern is evident. In Egypt, where the Kamel technique was developed, pterygia are extremely common.

### *The Kamel Technique*

Dr. Sabri Kamel of Egypt first called my attention to this operation during the war years. At the time of his last report he had performed more than six hundred such operations without a single known recurrence. Since many patients who are operated on for pterygium do not come back following a recurrence, it is difficult to get exact statis-

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tics. Dr. Kamel, however, disavows any recurrence among the six hundred cases he has followed. The technique, which is the essence of simplicity, is designed to attack the underlying pathology of the pterygium.

First, the eye is anesthetized with a 1 per cent solution of cocaine used as an instillation every two minutes, five or six drops in all being sufficient. The eye is washed and a drop of antiseptic solution is instilled. The neck of the pterygium, which is the part over the limbus, is caught with fixation forceps, and the head of the pterygium is well shaved from the corneal attachment with a Grafe knife. This gives a far cleaner dissection than tearing the pterygium loose with a strabismus hook as is often done. In shaving the head from the cornea, care must be taken not to leave the adherent areas near the limbus at the upper and lower borders. After this procedure, the head is held with fixation forceps while fine strabismus scissors are used to undermine the pterygium up to the caruncle. After the whole pterygium is undermined, it should be released and the patient instructed to direct the eye forward. The operator can then note whether the conjunctiva is redundant and lying over the cornea. In most cases, after the head is freed from the corneal attachment and the conjunctiva is undermined to the caruncle, the fold of conjunctiva which formed the pterygium will return to its place. No upper or lower borders will be seen and no redundancy will be noted. In some long standing cases, a small bit of the head will be found still redundant. This part should be excised with the scissors so that, with the gaze directed forward, the edge of the pterygium just touches the limbus.

When all redundancy has been overcome, the pterygium is held with fixation forceps, and with the fold of undermined conjunctiva raised away from the sclera, its under surface is cauterized with concentrated carbolic acid. The cauterizing is done with a wooden toothpick applicator which has been dipped in the carbolic acid. Only the under surface of the conjunctiva is cauterized, care being taken not to cauterize the surface of the sclera. This step completes the operation.

The conjunctiva is laid back on the sclera, and no sutures are taken because there is nothing to be sutured. Before the eye is bandaged, 5 per cent sulfathiazole ointment is placed in the lower cul-de-sac. The eye is

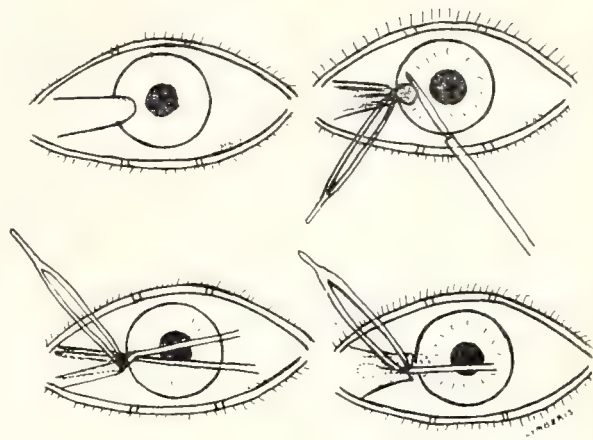


Fig. 1. Steps in the Kamel technique for removing pterygia.

dressed on the second and fourth days. Usually the dressing can be left off after the fourth day, and a bland ointment given for use as needed.

#### *Comment*

The operation is simple. There are no sutures to take, and, what is more important, no sutures to remove. In our series of cases the patients have been quite comfortable after the dressing was removed on the fourth day, and have had no complaints. In two or three weeks almost complete healing occurs and the eyes look perfectly normal. From a cosmetic point of view, the result is excellent.

By undermining the whole area up to the caruncle, we insure that all the fibrous tissue elements, which are the cause of the conjunctival encroachment over the cornea, are sticking to the under surface of the disentangled, raised fold of the conjunctiva. The cauterization has three purposes: (1) It hastens the process of healing; (2) it hastens the complete shrinkage of the fibrous tissue band, and (3) thereby constricts the blood vessels, reducing the blood supply and thus imitating and hastening Nature's self-limiting process. To prevent the conjunctiva from sticking to the sclera, care is taken to cauterize only the under surface of the conjunctiva. Any excess of carbolic acid on the wooden applicator is removed and any excess after cauterization is carefully swabbed away. It is not necessary to cauterize the area of the cornea from which the pterygium has been removed, although this procedure will do no damage.

### *Preliminary Report of 60 Cases*

Since adopting this routine eighteen months ago, Dr. Frank Smith and I have treated 60 pterygia by this technique. No series of cases in which pterygia have been removed has been reported previously in any American medical journal, to my knowledge. In preparing this preliminary report, we requested all patients to return to the office for an examination and photograph. Among those patients who have returned, only one recurrence of pterygium was found. This recurrence followed one of our first operations done by this technique, and was probably due to failure to dissect the conjunctiva as far back to the caruncle as necessary, and to cauterize thoroughly the under surface of the conjunctiva. When a second operation was performed several weeks ago, dense fibrous adhesions between the conjunctiva and the sclera were found. As soon as these were dissected away, the conjunctiva fell into its normal position, stopping at the limbus. The fibrous tissue under the conjunctiva was thoroughly cauterized and there has been no recurrence to date.

### *Conclusion*

A year and a half is too short a time in which to draw definite conclusions as recurrences after this operation. I believe, however,—and my colleagues concur in this opinion—that this simple method of operating for pterygium requires less time, gives results which compare favorably with those for any other method, and attacks the pterygium from its pathologic standpoint more completely than any other operation.

### *Abstract of Discussion*

**Dr. F. W. Stocker (Durham):** While it is true that pterygia are more likely to occur among people who are exposed to weather, they are occasionally seen among people whose occupations keep them indoors most of the time. I should like to draw your attention to some observations which have been made on identical twins.

Pterygia often occur in identical twins at the same place on the cornea, and at the same time of life. This finding does not exclude external factors, but it indicates the presence of an intrinsic factor as well.

I was one of those who tried to devise a new technique for removing pterygia, and my paper on this subject was published in the Archives of Ophthalmology in 1943. As I pointed out in that article, the head of the pterygia must be removed with a certain amount of underlying cornea; it should not be just sliced off.

The pterygium, as more recent research has shown, probably involves not only the conjunctiva, but the episcleral tissue, or the terminal part of Tenon's capsule as well. That is why it is necessary to dissect

the pterygia from the cornea down to the sclera and back. That method of dissection is probably the main feature in both Kamel's technique and also the one I have described.

Although I didn't cauterize the conjunctiva, I tried to make a flap of conjunctiva in such a way that the blood vessels did not tend to go into the cornea again, but pass the edge of the cornea sideways. The effect of cauterization with carbolic acid is probably similar to that obtained with radium in the treatment of recurrent pterygia. Radium obliterates these smaller blood vessels, and thus forms a dense scar tissue that will not encroach on the cornea.

**Dr. Roy A. Stewart (Newton):** We use concentrated phenol and a wooden toothpick applicator. We are careful to brush off any excess carbolic acid before cauterizing the surface of the conjunctiva. The conjunctiva is held as high as possible during the cauterization, and then a dry applicator is passed over the sclera to dry it completely.

**Dr. Lymberis:** So far—and I repeat a year and a half is not sufficient time—we have had but one recurrence, and I think we can well explain that recurrence on insufficient treatment of the degenerative tissue.

## APPENDICEAL CALCULI

### *A Case Report*

CHARLES E. KERNODLE, JR., M.D.

and

HAROLD B. KERNODLE, M.D., F.A.C.S.

BURLINGTON

Although fecal concretions are commonly found within the appendix, and the term "fecalith" is often used in the diagnosis of acute appendicitis, appendiceal calculi are rarely encountered. Bunch and Adcock<sup>(1)</sup> found one in 2,000 appendices. Because of the rarity of this condition and its clinical significance, we feel that a case report is in order.

The diagnosis of this case was suspected and made preoperatively. The preoperative roentgenogram is almost a duplicate of the one reported by Lowenberg<sup>(2)</sup>, whose article one of us had reviewed only a few days previously. A comparison of the two roentgenograms, plus the negative urinary tract findings, enabled us to make the diagnosis without the use of pyelograms.

### *Case Report*

A 36 year old married white female, the mother of four children, entered the hospital on December 9, 1949, with the chief complaint of severe pain in the right lower quadrant of the abdomen for the past twelve





Fig. 1 (above). Flat roentgen plate of the abdomen, showing a calculus in the right lower quadrant.

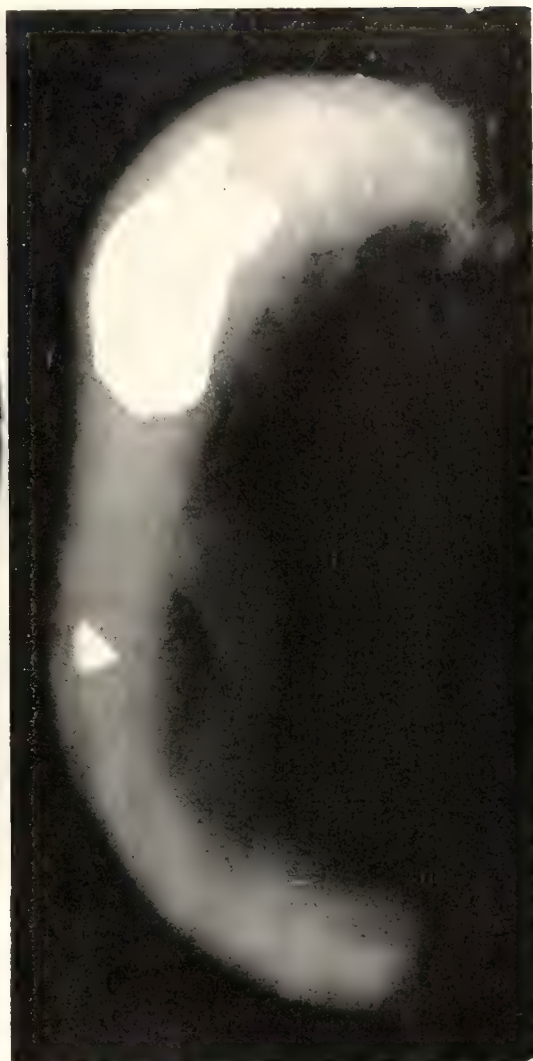


Fig. 2 (right). Roentgenogram of the appendix.

hours. Along with pain of increasing severity in the right lower quadrant, the patient also had seizures of severe cramping epigastric pain. At times during the examination she would cry out with severe pain in the epigastrium. The past history revealed no previous attacks of abdominal pain, and there was no history of urinary or bowel disorder. Past and family history were noncontributory.

The physical examination revealed a well developed, well nourished white female, who complained of severe pain in the right lower quadrant of the abdomen, and episodes of severe, knife-like pain in the epigastrium. The blood pressure was 120 systolic, 80 diastolic, the temperature 102 F., pulse 80, and respiration 22. The head and neck were normal, and the heart and lungs were clear to auscultation and percussion. The abdomen

was slightly distended, with an increase in muscle tone over the right lower quadrant and, to a lesser degree, in the epigastrium. Any pressure at McBurney's point caused severe pain, and there was rebound tenderness in the right lower quadrant, and referred rebound tenderness from other quadrants to the right lower quadrant. The pelvic and rectal examinations revealed tenderness high on the right.

Laboratory studies revealed a white cell count of 10,000, and a hemoglobin of 80 per cent. The urinary examination was normal.

A flat roentgen plate of the abdomen revealed a calculus in the right lower quadrant, and a moderate amount of gas in the ascending colon (fig. 1).

From the clinical and roentgen findings we made a preoperative diagnosis of appen-

diceal calculi, and the patient was prepared for an appendectomy. While she was under general anesthetic, the abdomen was entered through a McBurney incision, and an acutely inflamed suppurative appendix was found lying near the pelvic brim, with a large calculus in its proximal portion. There was no perforation of the appendix. The appendix, with the calculi, was removed.

The patient's postoperative course was uneventful. She was up twelve hours after the operation, and was discharged from the hospital on the fourth postoperative day. She has been followed since without complaints.

The pathologic report revealed that the appendix measured 7 cm. in length and 3 cm. at its widest point. It had been opened by the surgeon, and the calculi had been removed. The largest stone measured 3 by 2 by 2 cm., and was egg-shaped. The other stones were smaller.

The sections through the wall of the opened appendix revealed destruction of the superficial mucosa, and infiltration of the remaining mucosa by an acute hemorrhagic exudate. There was a layer of fibrin, enmeshing acute inflammatory cells, in the serosa.

### *Etiology*

Appendicitis may be due primarily to inflammatory change or to mechanical factors. Numerous foreign bodies have been reported in the appendix, any of which may form the nucleus of a fecalith or a calculus.

A bolus of feces impacted within the appendix may also serve as the nucleus of a calculus. Calcium salts from the mucous glands in the crypts of Lieberkühn may be deposited upon the concretion. Following this process, the appendix becomes thickened and the stone laminated by repeated deposits of salts<sup>(3)</sup>. Any interference with the circulation or the lymphatic drainage of the appendiceal wall during any of these episodes, may result in perforation<sup>(4)</sup>. The presence of a calculus associated with acute appendicitis carries a grave prognosis, since 80 per cent of the reported cases have been complicated by perforation or formation of abscess<sup>(5)</sup>.

### *Chemical Analysis*

Appendiceal calculi have been analyzed by Maver and Wells<sup>(5)</sup>, who studied twenty-five stones varying from 5 to 10 mm. in diameter. They reported that "about one-fifth of the material was organic residue, mostly vege-

table fiber, indicating that some part of the appendiceal concretions at least, come from the cecum. Probably the rest of the concretion is deposited from the wall of the appendix, since the bowel secretions are known to contain much fatty material and calcium." They found the calculi to contain inorganic material (chiefly calcium phosphate), 25 per cent, organic residue (chiefly vegetable fiber), 20 per cent, and fat soluble substances (coprosterol, soaps, and cholesterol), 50 per cent.

### *Differential Diagnosis*

Several diseases in addition to appendicitis should be considered in the differential diagnosis: (1) ureteral, renal, or vesical stone; (2) gallstone ileus; (3) cholecystitis and cholelithiasis; (4) phlebolith; (5) calcified mesenteric nodes; (6) retained barium; (7) calcified dermoid of the ovary; (8) calcified appendix epiploica; and (9) appendiceal foreign body.

Diagnostic procedures which are most helpful include a flat plate of abdomen, with the umbilicus marked for position; cholecystography; gastrointestinal series, and barium enema. Studies of the urinary tract, with intravenous and retrograde pyelography, are also helpful.

### *Summary*

A short discussion of appendiceal calculi has been presented, together with the report of one additional case which was diagnosed preoperatively. The chemical composition of appendiceal calculi was briefly discussed, and the differential diagnosis was considered.

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### *Armour Spikes Rumor of ACTH Shortage*

Telegrams have been sent to all approved hospitals in the country stating that regular suppliers can fill all orders for the "wonder drug" ACTH. The Armour Laboratories announced recently.

Armour and Company issued a statement saying that supplies of Acthar, the firm's brand name for ACTH, have been increased to the point where all orders are being filled and there is a six weeks' supply on hand, based on the present rate of use. Arrangements are also being made to further increase production to meet expanding demand.



## ANESTHESIA IN ANORECTAL SURGERY

B. RICHARD JACKSON, M.D.

RALEIGH

This presentation is an attempt to evaluate the methods of anesthesia used in a limited series of 250 consecutive anorectal operations\*. Two types of anesthesia were employed—regional and intravenous. The regional methods included intraspinal and extradural blocks, while the intravenous method was limited to the use of Sodium Pentothal. All the surgical procedures were limited to the lower 6 cm. of the anus and rectum, and did not include any malignant lesions. The pathologic specimens included internal and external hemorrhoids, anal crypts and papillae, anal fissures, anorectal fistulas, benign rectal polyps, and pruritic skin (table 1).

Table 1  
Classification of Cases

Diagnosis	No. Cases
Cryptitis .....	106
Hemorrhoids .....	149
Fissure-in-ano .....	61
Fistula-in-ano .....	35
Papillitis .....	45
Pruritus Ani .....	21
Polyps .....	13
Rectal Abscess .....	6

### The Choice of Anesthesia

The ideal anesthetic for anorectal surgery is that which (1) entails the least risk; (2) affords the patient complete freedom of pain during the operation; (3) produces complete relaxation for the time necessary to complete the operation; (4) is easily administered, without causing undue discomfort or pain; (5) produces no untoward side effects; (6) is applicable in the presence of all types of anorectal and constitutional diseases and disorders; (7) insures a complete and quick recovery, without complications.

The choice of anesthesia in each case in the present series was governed by the patient's general condition and the disease process present. In only a few cases did the patient refuse what was judged to be the anesthesia of choice. In a larger number of cases, the patient had to be persuaded that our choice of anesthesia was best. For many rea-

Table 2  
Types of Anesthesia Used With Different Age Groups

Age (Years)	No. Patients	Types of Anesthesia				
		Spinal	Caudal	Epidural	Pentothal	Ether
0-10	4					4
11-20	2	1			1	
21-30	41	19	1	3	18	
31-40	69	25	5	4*	35**	
41-50	71	40	4	3†	24‡	
51-60	40	25		1	14	
61-70	19	13		1	5	
71-80	4	3	1			
Total	250	126	11	12	97	4

\*Supplemented with Pentothal in 2 cases.

\*\*Supplemented with cyclopropane and oxygen in 2 cases.

†Supplemented with Pentothal in 1 case.

‡Supplemented with spinal anesthesia in 1 case.

sons, a large number of patients rebelled at the choice of spinal or caudal anesthesia, while a small group objected to Pentothal.

The problem of anesthesia was presented to each patient on the night before his operation. The choice of anesthetic in each particular case was explained, and, if the patient showed any sign of rebellion, the disadvantages of other agents were pointed out, together with each indication and contraindication in his particular case.

### Preoperative Preparation

The patient is admitted to the hospital on the day before the operation. A complete history is obtained, and the necessary physical examination and laboratory studies are made.

The patient is allowed his choice of food for his evening meal. That night and early the next morning he is given tap water enemas. Two hours prior to surgery he is given Seconal, 0.1 Gm. (1.5 grains). One hour later the dose is repeated and atropine, 0.45 mg. (1/150 grain) is administered. The pre-anesthetic doses are adjusted for children and older patients.

### Spinal Anesthesia (Intraspinal Block)

#### Advantages

It is doubtful that any other method of anesthesia equals the degree of relaxation afforded by spinal anesthesia. Administration is easy, even for those with limited experience. The small doses necessary for saddle block produce few, if any, toxic or untoward reactions, and recovery is quick and without

Read before the Piedmont Proctologic Society, Hendersonville, North Carolina, August 26, 1950.

\*The operations were performed at Rex Hospital, Raleigh, North Carolina, on private patients of the author.

incident. With the practice of early ambulation, any well controlled intraspinal anesthesia usually wears off quickly, allowing the patient to walk within a matter of minutes or an hour after returning from the operating room, when required.

### *Disadvantages*

The two most common complications resulting from the use of spinal anesthesia as a low saddle block are postspinal headache and spasm of the urinary sphincters. The factors usually responsible for the disadvantages and untoward side effects of this method may be minimized in perineal operations<sup>(1)</sup>. According to Wiggin<sup>(2)</sup>, there is no contraindication to spinal anesthesia for operations in which 50 mg. of Novocain and 5 mg. of Pontocaine, or less, are necessary. The few contraindications to this type of anesthesia that I have encountered were patients' unwillingness to have it, or the presence of extreme obesity, or pre-existing complaints or abnormalities at the sites of the puncture.

The complications arising at the time of operation are few, since small doses of the agent are used, and the anesthetic level is low. Circulatory and respiratory changes and insufficiency are seen but rarely. Only occasionally does the anesthesia wear off before the operation is completed. None of these complications were seen in the present series.

Postoperative complications following the use of spinal anesthesia are, in the main, neurologic. Eversole points out that this type of anesthesia may be a precipitating factor in the exacerbation of certain pre-existing neurologic conditions, such as pernicious anemia with combined sclerosis, multiple sclerosis, and tabes dorsalis<sup>(3)</sup>. Other neurologic complications include the cauda equina syndrome, headache, septic and aseptic meningitis, arachnoiditis, and cranial nerve palsies.

Only two complications were encountered in the present series. Postspinal headache occurred in 6 out of 126 cases, an incidence of about 5 per cent. Spasm of the urinary sphincters requiring catheterization developed in 4 of the patients, an incidence of 3 per cent. In only one case was it necessary to catheterize the patient more than once, and one week later this patient underwent an operation for ureteral colic, with the removal of ureteral calculi. The patients demonstrat-

ing postspinal headache were treated by bed rest and mild analgesics.

In this series the results obtained from using adrenal cortical extract, thiamin chloride, pituitrin, niacinamide, and other drugs recommended for the treatment of this distressing complaint were not impressive.

Rice and Dabbs have recently reported a series of 22 patients treated for postspinal headache by peridural injections of saline solution, with promising results<sup>(4)</sup>. With one exception, these patients obtained dramatic relief within three to five minutes. Ten patients had no return of symptoms, and the remainder had only slight return. I have not had the opportunity to try this method on any of our patients with postspinal headaches, but one patient on the general service of our hospital was treated and cured dramatically by this method.

The solution may be given in a single injection, through an ordinary spinal needle, at the site of a previous lumbar puncture, or through peridural or indwelling continuous caudal catheters. For single injections, the recommended dosage is 20 to 30 cc. in this lumbar puncture site, and 45 to 50 cc. in the caudal canal. I recommend saline solution, prepared in ampules by commercial manufacturers, in preference to the saline preparations made by the hospitals.

### *Technique*

For the past two years I have employed the following technique routinely in the administration of spinal anesthesia. The patient is placed in a sitting position, bending slightly forward, with the forearms crossed, the elbows placed on the mid thighs, and the chin resting on the chest. He is then told to hunch his back out like a cat. The back is prepared with some suitable antiseptic solution, and a skin wheal is raised by a 2 per cent solution of Novocain, containing 25 mg. of ephedrine, where the lumbar puncture is to be made in the third or fourth interspace, using a 22 gauge, 3-inch spinal needle. Two cc. of spinal fluid are withdrawn and mixed with 25 mg. of Novocain crystals or 3 mg. of Pontocaine in 0.6 cc. of a 10 per cent solution of dextrose. This solution is injected steadily in five to ten seconds, using barbotage once, and the needle is immediately withdrawn. The patient is instructed to sit for five minutes while the anesthetic solution becomes fixed. He is then placed in the right Sim's position and the operation is performed.



I have found that this dosage is effective—regardless of the size, weight, and age of the patient—from one to one and a half hours. In 3 cases of complicated fistula, the ephedrine was omitted from the skin wheal injection, but was injected subdurally with the anesthetic agent. It is believed that ephedrine prolongs the usual dose of spinal anesthesia.

### *Results*

I have been pleased with the level of anesthesia attained by this technique. The majority of patients have had complete sensory loss and relaxation of the saddle area alone. Following the operation they were able to slide on the waiting stretcher without help, demonstrating no motor loss of the legs. Although a few patients showed partial motor loss and hypalgesia of the right leg, none had complete surgical anesthesia of both legs. Hemianesthesia of the saddle area occurred in 4 cases. In 3 of these cases, small supplementary doses of Pentothal were given, and in one case local infiltration of 1.5 per cent procaine was used.

### *Conduction Anesthesia:*

#### *Caudal and Lumbar Epidural Blocks*

As more anesthetists are trained in these relatively difficult procedures, caudal and lumbar epidural blocks are becoming increasingly popular. The advantages are similar to those of low spinal anesthesia, while post-spinal headache is avoided. Changes in blood pressure and pulse are extremely rare. The general public, moreover, is less opposed to caudal anesthesia than to spinal anesthesia. The method is contraindicated in cases of extreme obesity or abnormalities at the site of the puncture.

The disadvantages encountered in this small group of 11 caudal and 12 epidural blocks may not be conclusive. In 6 of the 11 cases of caudal block, there were complaints of severe low back pain, lasting on an average of four days. The hospital saline used for these blocks has been suspected of causing this complication, which is certainly not a common one.\*

One distinct disadvantage of these anesthetics has been the length of time required for induction. In large hospitals with resident training programs in anesthesia, these blocks may be administered in other rooms

while the surgeon is finishing the previous case, but in hospitals where the surgeon or only one anesthetist is available for each case, there is a delay of at least 30 minutes between operations. We have found that both caudal and epidural blocks become effective within an average of 15 minutes after the administration.

Bacon states that when caudal analgesia is not supplemented by transsacral block, there is a failure in a small percentage of cases<sup>(5)</sup>. Three patients in this series were given caudal and transsacral blocks; the remaining 8 patients received caudal block alone. One patient in the latter group had inadequate anesthesia, and was given a spinal anesthetic. Of the 12 patients having epidural blocks, 3 were not adequately anesthetized, and had to be given supplementary doses of Pentothal. Further experience should enable us to determine the advisability of using epidural anesthesia alone, or in combination with some other form of anesthesia.

### *Technique and advantages of epidural block (lumbar)*

Because this is a relatively new method of administering epidural anesthesia, the procedure will be described briefly. The technique is similar to that used for spinal anesthesia except that an 18 gauge needle is passed into the interspace between the fourth and fifth lumbar vertebrae, and, on penetrating the thick intraspinal ligament, the stylet is withdrawn. Since the dura is not punctured, there should be no flow of spinal fluid. An empty 10 cc. syringe is then attached to the needle, and the plunger is pulled back gently in order to make sure that an intradural puncture has not been made. When it is certain that the tip of the needle is in the epidural space, 30 cc. of a 1.5 per cent solution of Metycaine is slowly injected, with gentle aspirations of the plunger after the injection of each 2 or 3 cc.

The advantage of this type of epidural block over caudal block is that it is a much simpler procedure, consumes less time, and requires less experience. Whether the percentage of cases with complete anesthesia equals that obtained with caudal block remains to be seen. As with caudal block, the early signs of a successful lumbar epidural block are transient pain or shooting sensations in the thighs, and flushing and warming of the skin of the toes and feet.

\*Since switching to a commercially prepared saline, the anesthetist at our hospital reports that there has been no recurrence of this complaint.

### *Pentothal Anesthesia*

Pentothal, administered intravenously, has proved to be an excellent anesthesia in carefully selected cases of anorectal surgery. For minor rectal operations requiring less than 15 minutes, in patients having no contraindications to this drug, I consider it to be the anesthetic of choice. In operations requiring from one half-hour to an hour, I have used it in conjunction with nitrous oxide and oxygen, with generally satisfactory results.

#### *Advantages*

The outstanding advantages of this anesthesia are ease of administration and control, rapidity of induction, and the low incidence of postoperative complications. Patients who have had Pentothal before are usually eager to have it again, and it is difficult at times to persuade them that another anesthetic would be better.

After a short period of anesthesia, recovery takes place within 15 to 20 minutes. After a long period, recovery may require many hours, with depression lasting long enough to increase the hazard of atelectasis<sup>(6)</sup>. This is probably the most serious disadvantage in the use of this anesthesia. Pentothal does not give complete relaxation, except in doses large enough to depress the respiratory center; therefore, when complete relaxation is necessary, it is wiser to use another anesthetic, or to supplement Pentothal with inhalation mixtures or curare.

#### *Disadvantages*

Pentothal Sodium is a respiratory depressant and, therefore, is contraindicated in the presence of respiratory embarrassment, as in cardiac decompensation, asthma, bronchiectasis, and pulmonary tuberculosis. Children under 12 years of age do not tolerate intravenous Pentothal well because of their susceptibility to respiratory depression<sup>(7)</sup>. Venipuncture is often frightening to these children, and difficult because of their small veins. Since Pentothal is excreted by the kidneys, it should be used with caution in patients with kidney disease and failure. Unless large depressing doses are given, however, it is not contraindicated for these usually aged and toxemic patients.

In this series of 97 cases, only one complication arose at the time of operation. Three patients could not be anesthetized sufficiently for the operation. Two patients were given supplementary cyclopropane and oxy-

gen, and one patient was given spinal anesthesia after a quick recovery from the administration of 2 Gm. of Pentothal. All 3 patients had refused our choice of spinal anesthesia. Two of these were known to be heavy consumers of alcoholic beverages, indicating an unusual tolerance for Pentothal. Fortunately, laryngospasm did not occur in this series.

Three postoperative complications may follow the intravenous administration of Sodium Pentothal—prolonged anesthesia, thrombophlebitis of the injected vein, and perivenous cellulitis. In patients given Pentothal with supplementary nitrous oxide and oxygen for operations averaging 30 minutes to an hour, a conscious reaction may be expected within an hour after the drug is discontinued. Three patients had what I considered to be prolonged narcosis. One patient did not react for six hours, and remained in a semistuporous state for 22 hours. The other 2 patients, having shown conscious reaction within two hours, remained semistuporous for six and seven hours respectively.

In this series, the practice was to administer Dexedrine, in doses of 5 to 10 mg., about four hours after Pentothal anesthesia to those patients who were unable to get out of bed and walk. The pick-up resulting from the use of this drug has been generally satisfactory. However, these 3 cases did not respond appreciably, even with the use of Metrazol, caffeine, and picrotoxin, and the most resistant patient was given intranasal oxygen for six hours.

It is interesting to note that all 3 patients were given less than 2 Gm. of Pentothal within one hour. So far as could be determined, there were no contraindications to the use of this drug in these cases, and yet this complication resulted. As mentioned previously, one patient in the series could not be anesthetized sufficiently with 2 Gm. of Pentothal and recovered quickly enough to cooperate when spinal anesthesia was administered. These facts bring out clearly the importance of the individual patient's tolerance to Pentothal, and the impossibility of measuring that tolerance preoperatively. Unlike spinal anesthesia, the dosage of intravenous Pentothal varies with the tolerance of individual patients.

Infiltration of Pentothal into the surrounding tissues of the injected vein is a painful complication of this anesthesia. In sufficient



quantities, it has produced induration, with abscess and sloughing. One patient in the present series complained of a swollen, indurated arm for twenty-one days. The complaint was noticeable on recovery from the anesthesia, and 10 cc. of a 1 per cent solution of procaine was injected into the affected tissues, affording some relief. An arm sling and local applications of heat were advised.

### *Technique*

Surgical anesthesia is most safely achieved by using a 2.5 per cent solution of Pentothal. One gram is mixed with 40 cc. of distilled water. The patient is placed in the right Sim's position, and a convenient vein selected, either on the dorsum of the right hand, radial surface of the wrist joint, forearm, or antecubital fossa. The solution is injected slowly, usually at the rate of about 1 cc. per five seconds, and the patient is encouraged to count or talk. After the injection of 4 or 5 cc., the average patient stops talking, his respirations become shallow, and the corneal reflexes are obliterated. From this stage on, the dosage varies with the individual. Apnea is an early danger sign, and when it occurs—as it often does after the injection of the first cubic centimeters—further injections should not be made until the patient resumes breathing.

An adequate airway is essential in the administration of this anesthesia, and the means of giving intratracheal oxygen and respiratory stimulants should be on hand at all times. The use of nitrous oxide-oxygen, 50 per cent, enables the patient to maintain a high oxygen intake, and the total dosage of Pentothal is decreased.

### *Inhalation Anesthesia*

While a great many surgeons prefer general anesthesia to regional methods for operations on the anus and rectum, we have limited our use of inhalants to small children, or to supplement the methods previously described. There can be no question as to the limited amount of relaxation of the anus obtained with deep general anesthesia, as compared with that obtained with intradural and extradural blocks.

As stated previously, nitrous oxide-oxygen, as a supplement to Pentothal, is of distinct value and, in my opinion, a safeguard against prolonged narcosis.

Four patients in this series, all children under 10 years old, were anesthetized with open-drop ether. This is probably the safest

method for children. Though we have not had any experience with intrarectal Sodium Pentothal supplemented with nitrous oxide, we can foresee its use in short, simple surgical procedures that do not require relaxation.

### *Summary and Conclusion*

The various types of anesthetics used in a rather limited series of cases of anorectal operations have been discussed from the standpoint of advantages, disadvantages, contraindications, and complications arising both at the time of operation and postoperatively. Regional methods of anesthesia have, in this series, been preferable in spite of a few postoperative complications.

It is my opinion that intradural and extradural blocks are safer, and are indicated more often in all patients, regardless of individual risk, the only exception being in small children where open-drop ether is preferred. The choice between lumbar or caudal epidural blocks and low saddle block spinal must await further experience.

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In industry the application of exhaustive health inventories should start at the top. The individual value of key personnel justifies the relatively high cost of a properly conducted, constructive medical program. Furthermore, key personnel are almost invariably senescent. Wisdom and judgment are conditioned by experience, and experience depends upon time for its acquisition. The greater the specialization, the greater the difficulty in finding replacements. The greater the responsibility, the heavier the wear and tear and therefore the greater the jeopardy to these essential citizens.—Edward J. Stieglitz: *A Future for Preventive Medicine*, New York, The Commonwealth Fund, 1945, p. 59.

Even though control measures are only one factor in the eradication of tuberculosis, they may very well be the decisive factor. Anything which will reduce the size of the reservoir of the tubercle bacillus in human beings will lessen the number of new cases of tuberculosis. Every case of the disease, actually or potentially infectious, which is discovered and brought under control is a step in reducing the size of this reservoir. A. C. Christie, M.D., *Pub. Health Reports*, June 2, 1950.

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### PAUL DE KRUIF BOOSTS THE DOCTORS

One of the best tributes that have ever been paid the medical profession is an article by Paul de Kruif, in the *Reader's Digest* for May, entitled "Your Doctor for a Friend." Over the title on the first page of the article are the words: "A doctor's responsibility does not end with healing the sick, but you must help him if you want—Your Doctor for a Friend."

This journal has often disagreed with Dr. de Kruif in the past—but it is now happy to call attention to the sympathetic manner in which he tells the great reading public of the *Digest* that the great majority of doctors really are friends of their patients. He quotes as evidence the first sentence of the Principles of Ethics of the American Medical Association: "The prime object of the medical profession is to render service to humanity; reward or financial gain is a subordinate

consideration." As additional proof he cites the establishment of grievance committees and of emergency service systems for the protection of the public.

Dr. de Kruif's tremendous influence with the public gives great importance to the following statement: "It takes two to make friends; how can we help our doctors? We should select a family doctor and get acquainted with him before illness strikes; we shouldn't tax him with unnecessary calls; we should follow his directions exactly. We should tell him our financial condition as well as our symptoms. To help our doctors with their new grievance boards, we can remember these simple tests of any doctor's friendship."

Then he tells the reader that a doctor is not his friend if he demands assurance of payment before rendering professional services; if he refuses to go to see a really sick patient; if he charges more than the patient can pay; if he operates unnecessarily; if he attempts operations beyond his ability, and if he does not keep abreast of medical advance. "If your doctor does not show you how you can insure yourself against the shock of illness, through voluntary prepayment plans, he is not your friend."

Dr. George Lull is quoted as saying: "We are determined to see that any practices unworthy of the medical profession are discontinued; it is further our purpose to provide the people of the nation with the best possible care."

In closing Dr. de Kruif answers the question: "How can we help our doctors keep this pledge?"

"By seeing to it that they are respected as individuals. If our doctors were to be turned into bureaucrats and hamstrung with government red tape, they couldn't hold our confidences inviolate, they couldn't fight as they're now doing to raise their technical skill, they couldn't treat us as human personalities, as friends—but only as numbers in their files.

"If your doctor is not his own man, he cannot be your friend."

It is certain that the NORTH CAROLINA MEDICAL JOURNAL speaks for the doctors of North Carolina in thanking Dr. Paul de Kruif for being such a friend to the doctors of this state and of this country.



## "TROUBLE IN OUR HOSPITALS?"

No doubt many doctors have been asked about the article, "Trouble in Our Hospitals," in the May number of the *Woman's Home Companion*. The article was written by Albert Deutsch, who was formerly on the staff of the left wing publication, *PM*. Apparently Mr. Deutsch has a long standing grudge against the medical profession, for he has repeatedly sought to smear it in the past. In this article he outdoes himself in his efforts to low-rate the doctors, especially the American Medical Association. It is to be hoped that all doctors who read or heard of the article will read George Lull's Secretary's Letter for April 30 and learn from it that duplicate telegrams of protest signed by George Lull, secretary of the A.M.A., and George Bugbee, secretary of the American Hospital Association, were sent to the editor of the *Woman's Home Companion* and to the chairman of the board of the Crowell-Collier Publishing Company. The telegram said:

"While it is true that there are some areas of disagreement between physicians and hospitals—just as there are in all human relationships—the author of this article has magnified these differences out of all proportion to the truth. His statement that 'The A.M.A. and the hospitals, which should be marching hand in hand toward better services for the sick, are locked in combat,' is nothing short of sensationalism.

"The doctors and hospitals have always cooperated in efforts to deliver the best possible medical care and will continue to do so. Any differences are being ironed out and peaceably around the conference table."

It is to be hoped that the editor of the *Woman's Home Companion* will have enough sense of fair play to print this telegram.

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## THE NORTH CAROLINA MEDICAL JOURNAL ABROAD

The author of a recent paper published in the NORTH CAROLINA MEDICAL JOURNAL has had at least a dozen requests for reprints from outside the United States. The countries represented included England, Germany, Italy, Czechoslovakia, Turkey, and South America. It is gratifying to know that our state journal is read abroad as well as at home.

## THE NATION'S HEALTH RECORD

An advance release from the FEDERAL SECURITY AGENCY Public Health Service (sic) stated that "the 1949 death rate followed the same declining trend which has been shown for the past 10 to 20 years. In 1949, the death rate declined from 9.9 per 1,000 population in 1948, to 9.7 per 1,000. Although 3.7 million babies were born in the United States in 1949—fewer infants died in the first year of life. Maternal deaths also declined. In 1949, the infant mortality rate was 31 for every 1,000 live births, and the maternal mortality rate was 9 per 10,000 live births."

In 1940 the national death rate was 10.5 per 1,000, the maternal mortality was 3.8, and the infant death rate was 47 per 1,000 live births. How much better does Mr. Oscar Ewing think he could have done had he been our Minister of Health during this past decade?

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## DR. MARY MARTIN SLOOP— AMERICAN MOTHER OF YEAR

Those who know of the remarkable career of Dr. Mary Martin Sloop of Crossnore were not surprised to learn that she had been selected by the American Mothers Committee of the Golden Rule Foundation as the American Mother of the Year. North Carolina doctors can feel particularly proud of Dr. Sloop. She and her husband are both physicians. Their only daughter, Dr. Emma Sloop Fink, is practicing at Crossnore, and their only son, Dr. William Martin Sloop, is in charge of a dental clinic for the county.

Within the past forty years Dr. Mary M. Sloop has been in many ways better than a mother to more than 3,000 underprivileged mountain children through her work in the Crossnore School. Beginning with a one-room cabin in 1911, she now has a settlement with school and hospital facilities adequate to care for more than 900 children through high school age. The American Mothers Committee for North Carolina was justified in writing the national committee: "She is considered by thousands of friends as the first citizen of North Carolina."

## Committees and Organizations

### *Committee on Rural Health and Education*

The fourth Annual Rural Health Conference, sponsored jointly by the Rural Health Committee of the Medical Society of the State of North Carolina and the North Carolina Health Council, will be held June 7 and 8 at the Sir Walter Hotel in Raleigh. A program is being planned which will be of genuine interest to all concerned with health in the state, both professional and lay people.

Dr. F. S. Crockett, chairman of the Rural Health Committee of the American Medical Association, will be one of the featured speakers. Another significant feature will be a panel entitled "A Report to the State," by representatives of state agencies and institutions with health programs. The University of North Carolina, the Medical Care Commission, mental and tuberculosis hospitals, the state departments of health, welfare and education and the Blind Commission will report on the current status of their programs and building projects and their more urgent needs, with particular reference to the effect of appropriations and legislation by the recent session of the General Assembly.

There will be an exhibit of all kinds of educational materials, including movie films, and the film librarian of the State Board of Health will be on hand to give showings of films in which there is special interest, and to advise with reference to available films for different purposes and groups.

It is hoped that a large number of members of the State Medical Society will attend the Conference, and that physicians will co-operate in stimulating attendance by health-interested lay people from their communities. There will be no registration fee this year.

### **ACTH, Cortisone Combats New Pulmonary Disease**

Successful application of the new drugs, ACTH and cortisone, in retarding the deadly effects of a new pulmonary chest disease, chronic berylliosis, was described recently before the American Association of Industrial Physicians and Surgeons by Dr. H. E. Tebrock of Sylvania Electric Products, Inc. Dr. Tebrock cautioned, however, that ill effects might result from the continued use of the drugs. He said that the possibility of adrenal and pituitary atrophy must be considered.

## BULLETIN BOARD

### NEWS NOTES FROM THE DUKE UNIVERSITY SCHOOL OF MEDICINE

#### Postgraduate Course June 18-21

##### Monday, June 18

- 8:30 A.M.—Registration
- 9:00 A.M.—A Discussion of Primary Tuberculosis. E. E. Menefee, Department of Bacteriology and Medicine.
- 10:00 A.M.—Common Pulmonary Lesions (an x-ray demonstration). Robert J. Reeves, Department of Roentgenology.
- 11:00 A.M.—Recent Advances in Thoracic Surgery. Will C. Sealy, Department of Surgery.
- 12:00 Noon—Lunch.
- 2:00 P.M.—Ward rounds or visits to clinics.
- 7:30 P.M.—Round table discussion. Subject: Congestive Failure. Eugene A. Stead, moderator, Department of Medicine. James P. Hendrix, Department of Medicine. Edward S. Orgain, Department of Medicine. Will C. Sealy, Department of Surgery.

##### Tuesday, June 19

- 9:00 A.M.—A Discussion of Urinary Tract Infections. Edwin P. Alyea, Department of Urology.
- 10:00 A.M.—A Discussion of Glomerulo Nephritis. Jerome P. Harris, Department of Pediatrics.
- 11:00 A.M.—On the Diagnosis and Treatment of Diarrhea. Julian M. Ruffin, Department of Medicine.
- 12:00 Noon—Lunch.
- 2:00 P.M.—Ward rounds or visits to the clinics.
- 7:30 P.M.—Round table discussion. Subject: Pain. John B. Pfeiffer, moderator, Department of Neurology. Barnes Woodhall, Department of Neuro-Surgery. James P. Hendrix, Department of Medicine. Maurice Greenhill, Department of Psychiatry.

##### Wednesday, June 20

- 9:00 A.M.—Chemotherapy in the Treatment of Certain Diseases of the Blood. Oscar C. Hansen-Pruss, Department of Medicine.
- 10:00 A.M.—Self Limited Psychiatric Entities. George A. Silver, Department of Psychiatry.
- 11:00 A.M.—Staff Conference (presentation of patients with informal discussion by members of the faculty).
- 12:00 Noon—Lunch.
- 2:00 P.M.—Ward rounds or visits to clinics.
- 6:30 P.M.—Barbecue. Turnages, guests of Duke University.

##### Thursday, June 21

- 9:00 A.M.—Isotopes and Their Relation to Clinical Problems. A Discussion led by Jerome S. Harris, with George Baylin, William M. Nicholson and William Shingleton.
- 10:45 A.M.—A Brief Discussion of C6. Edward S. Orgain, Department of Medicine.
- 11:00 A.M.—Neurological Conference. (Presentation of patients with discussion by members of the Departments of Neurology, Neuro-Surgery and Psychiatry).
- 12:00 Noon—Lunch.
- 2:00 P.M.—Ward rounds or visits to clinics.



Dr. Norman F. Conant, professor of mycology, Duke University School of Medicine, is in Europe for two months, speaking on mycology, the science of fungi, at the invitation of Dr. Arvid Lindau, professor of bacteriology, at the Bakteriologiska Institutionen, Lund, Sweden. At Lund he will conduct, by special invitation, the doctoral examination for Ake Norden, a Swedish Rockefeller Fellow who has just completed 18 months' training at Duke toward his M.D. degree.

A leading specialist in his field, Dr. Conant is director and founder of the Duke Fungus Registry, one of the world centers of diagnosis and study of fungus disease.

#### NEWS NOTES FROM THE BOWMAN GRAY SCHOOL OF MEDICINE OF WAKE FOREST COLLEGE

Dr. Marjorie Swanson, assistant professor of biochemistry, has received a grant of \$3,200 from the American Cancer Society for study of the metabolism of washed tissue particles as part of a general attempt to find how cells use energy to grow.

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Ten students were inducted into the Beta chapter of Alpha Omega Alpha, national honor society, in exercises held on April 10. Dr. Louis N. Katz, director of the cardiovascular department of the Medical Research Institute, Michael Reese Hospital, Chicago, Illinois, was speaker. The new members are: Walter Richard Burack of Brookline, Massachusetts, William Eugene Cornatzer of Farmington, Marcus M. Gulley of Alexandria, Virginia, Thomas Lee Gwynn of Yanceyville, Robert Ross Huntley of Wadesboro, Howard Allan Jemison, Jr., of Winston-Salem, and Randolph Dennis Mills of Henderson of the senior class; and Clarence Leroy Gantt of Asheville, Richard Arnold Groat and John Thomas Joyner III of Winston-Salem.

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Approximately 200 doctors attended the two-day meeting of the Wake Forest College Medical Alumni Association held at Bowman Gray School on April 6 and 7. Jim Weaver, Wake Forest athletic director, was banquet speaker. Dr. H. M. Vann of the Bowman Gray faculty, secretary and treasurer, reported that the alumni had contributed \$2,500 during the past year to the Thurman D. Kitchen Medical Alumni Library Fund, named in honor of the former president of the college. Dr. D. R. Perry of Durham heads the alumni group.

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Dr. Lucille Hutaff, director of the clinical laboratory and hematology, has been named head of the Medical Advisory committee for the blood program of the Winston-Salem chapter of the American Red Cross.

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Dr. Ernest H. Yount, Jr., instructor in internal medicine, has recently passed the examinations of the American Board of Internal Medicine and is now a certified specialist in that field.

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Dr. Clarence McMurray, Dr. David Cayer, and Dr. W. E. Cornatzer, of the departments of internal medicine and biochemistry, are authors of an article which appeared recently in *Gastroenterology*. The subject was "Chronic Adhesive Pericarditis Due to the Rheumatic State, Associated with Liver Damage, Serious Effusions, and Pigmentation" (Beneficial Effect of Pericardectomy on the Phospholipid Turnover and Other Liver Functions After Failure of Medical Management.)

Dr. George T. Harrell, Jr., professor of internal medicine, spoke at the Dallas and McKinney Veterans' Hospital in Dallas, Texas, on March 20. His subject was "Mode of Action of Chemotherapeutic Agents." On the same trip he addressed the Dallas Internists' Club at a luncheon meeting on "Macrocytic Anemias" and spoke at the Southwestern Medical College on "Sarcoidosis."

At the meeting of the Commission on Chronic Illness in Chicago, Illinois, last month, Dr. Harrell spoke on "Preventive Measures in Private Practice."

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Dr. Felda Hightower spoke on "Treatment of Burns," and Dr. R. Winston Roberts discussed "Common Diseases of the Eye," at the meeting of the Fifth District Medical Society at McCain on March 29. Both are assistant professors in the department of surgery.

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Dr. Wingate M. Johnson, professor of clinical medicine, is the author of an article on "Some Unusual Manifestations of Pancreatitis" which appeared in the April issue of the *Southern Medical Journal*. Dr. Manson Meads, assistant professor of internal medicine, wrote on "Enhancement of Serum Penicillin Levels in Man by Benemid" in the same issue. Dr. Victor H. Knight and Dr. H. LeRoy Izlar, Jr., both of the department of internal medicine, collaborated.

Dr. Jerry K. Aikawa, research Fellow of the American Heart Association, had an article on the "Effect of Intravenous Digitoxin on Fluid Distribution in Hospitalized Males with Cardiovascular Disease" in the February issue of the *Proceedings of the Society for Experimental Biology and Medicine*.

#### NEWS NOTES FROM THE UNIVERSITY OF NORTH CAROLINA SCHOOL OF PUBLIC HEALTH

Dr. E. G. McGavran, Dean of the School of Public Health, has been elected Vice President of the Association of Schools of Public Health.

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Dr. John J. Wright, Professor of Public Health Administration, was elected Vice President of the American Venereal Disease Association at the thirteenth annual session of that organization, which was held in Washington, D. C., April 24 and 25.

At the same session, several members of the faculty of the school presented papers. These were:

Harold J. Magnuson and Frederick A. Thompson, Jr.—Acquired Homologous Strain Immunity Produced by Repeated Cured Infections with Syphilis in the Rabbit.

Charlotte P. McLeod with Richard C. Arnold (National Heart Institute)—A Study of Immunity in Experimental Syphilis with Challenge by Contact Exposure or by Inoculation; Relative Effectiveness of Penicillin Therapy in Early Symptomatic and Latent Syphilis.

John J. Wright, Cecil G. Sheps, Eugene E. Taylor, and Alice E. Gifford—A Retrograde Epidemiological Study of Congenital Syphilis.

Harold J. Magnuson, Frederick A. Thompson, Jr., and Charlotte McLeod—Relationship between Treponemal Immobilizing Antibodies and Acquired Immunity in Experimental Syphilis; Relative Rendered into active military service by the Army since Inoculation of T. pallidum (Nichols Strain).

Dr. Cecil G. Sheps, associate professor of Public Health Administration, participated in the National Conference on Chronic Diseases, which was held March 12, 13 and 14, at Chicago, as a member of the Committee on Education of Physicians and Dentists.

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An Institute on the Health of Children of School Age was held at Chapel Hill on April 3 and 4. This was the seventh in a series of continuation education courses being developed by the School of Public Health.

The Institute, designed for health officers, was planned to give them a better insight into health promotion in school age children and of their role in programs aimed at meeting the health needs of this age group.

The participants were welcomed by Dr. E. G. McGavran, Dean of the School of Public Health and Dr. Henry T. Clark, Jr., Director of the Division of Health Affairs of the University.

Dr. Myron E. Wegman, associate professor of pediatrics of the Louisiana State University Medical College, was principal lecturer. Dr. Wegman has had experience in both rural and urban health work besides his teaching duties at Louisiana State University.

#### NORTH CAROLINA ACADEMY OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

The North Carolina Academy of Preventive Medicine and Public Health was formally organized at a meeting held in Chapel Hill on March 15. At this meeting the following officers were elected: president, Dr. Edward G. McGavran; president-elect, Dr. Malcom T. Foster; secretary-treasurer, Dr. R. E. Coker, Jr.; members at large of the executive committee, Dr. Millard B. Bethel and Dr. J. W. R. Norton.

Formal announcement of the organization was made in a letter to Dr. Roscoe D. McMillan, president of the Medical Society of the State of North Carolina. The purpose of the Academy is "to encourage the study, improve the practice and advance the cause of preventive medicine and public health." Invitation to membership is extended to each Diplomat of the American Board of Preventive Medicine and Public Health resident in North Carolina.

#### NORTH CAROLINA ALCOHOLIC REHABILITATION PROGRAM

The first edition of a bi-monthly journal on alcohol and alcoholism was issued the first week in May by the North Carolina Alcoholic Rehabilitation Program, S. K. Proctor, executive director, announced recently. The pocket-size journal has been named *Inventory*, a title explained in the lead editorial of the first issue, and will feature a variety of articles adapted for general and specialized readers alike.

Progress and development in the North Carolina program will be featured with news from other programs over the nation, including special Yale University articles on the latest findings in alcohol and related problems.

Edited by ARP educational director, Sanford Martin, Jr., the magazine will open circulation to 6,000 citizens in the medical, ministerial, and public service fields. It will also go to state Alcoholics Anonymous groups, high school and college libraries, news and legislative officials.

Editorial and circulation offices are in the ARP Raleigh office at 357 Revenue Building Annex.

#### Alcoholism — An Illness

Thousands of North Carolinians have shown an interest in alcoholism as a social problem, but relatively few have accepted it as an illness and the alcoholic as a sick person. The failure has been one of inertia, of convenient blinders to what exists rather than what seems to exist. We have failed to realize that people don't drink to excess habitually because they want to. We find it hard to separate personality sickness from moral decay, or inner need from traditional "weakness."

According to Lawrence Kolb, former Assistant Surgeon General in the United States Public Health Service, "Many of these people could be saved, if in the early stage of their chronic alcoholism, they were handled like sick people instead of being treated like criminals or left to shift for themselves."

Until the general public recognizes alcoholism as an illness and the alcoholic as a sick person, we can safely presume the "bum" will continue to feel like "a bum," act like one, and suffer like one.

Until we exchange the inevitable jail for the hospital ward, we can hardly expect the problem drinker to care, to want, or to try. Desire to quit must exist, and perpetual public scorn never built such desire.

When the alcoholic "bum" and our "Uncle Snorts" become accepted patients, a major North Carolina health problem will be on its rightful way toward the laboratory, the hospital, and the medical profession.

#### EIGHTH DISTRICT MEDICAL SOCIETY

The Eighth District Medical Society met in North Wilkesboro on Thursday, April 19, with Dr. C. A. Thompson presiding. The following scientific program was presented: "Iatrogenesis of Disease"—Dr. J. H. McNeill, North Wilkesboro; "The Diagnosis and Treatment of Marital Sterility"—Dr. R. L. Wall, Jr.; "The Diagnosis and Treatment of Pancreatitis"—Dr. Wingate M. Johnson; and "Spontaneous Subarachnoid Hemorrhage"—Dr. Eben Alexander, of Winston-Salem.

Following a business session in which new officers were elected, Mr. James T. Barnes, executive secretary State Medical Society, spoke on the school health program, and Mr. Leroy H. Cox, public relations councilor, State Medical Society, spoke on public relations. At the dinner session Dr. Roscoe D. McMillan, president of the State Medical Society, was guest speaker. He was introduced by Dr. Fred C. Hubbard, president-elect of the State Society.

#### THIRD DISTRICT MEDICAL SOCIETY

The Third District Medical Society held its spring meeting at the American Legion Building in Wallace, on Friday evening, April 6. Dr. John Fatoopoulos of the Radiology Department, Camp Lejeune, spoke on "Atomic Energy and Its Casualties." Moving pictures were shown.

Officers elected for the coming year are: Dr. Deane Hundley, Jr., of Wallace, president; Dr. W. A. Greene of Whiteville, vice president; Dr. S. E. Warshauer of Wilmington, secretary-treasurer.

#### FORSYTH COUNTY MEDICAL SOCIETY

The regular monthly dinner meeting of the Forsyth County Medical Society was held in conjunction with the annual meeting of the Winston-Salem and Forsyth County Heart Association on Thursday, April 12, at the Robert E. Lee Hotel, Winston-Salem.



## NEWS NOTES

Dr. Louisa C. Littleton has opened offices at 626 Salisbury Road, Statesville, North Carolina. Her practice will be limited to infants and children.

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The following physicians were registered at the fourteenth annual meeting of the New Orleans Graduate Medical Assembly, which was held in March: Dr. J. Irvin Biggs, Lumberton; Dr. A. A. Dorenbusch, Charlotte; Dr. Fred Walls, Shelby; Dr. S. S. Hutchinson, Bladenboro; Drs. B. E. Morgan and C. C. Swann, Asheville; Dr. Charles L. Newland, Brevard; Dr. William W. Noel, Henderson; Dr. Ralph G. Templeton, Lenoir.

## SOUTH ATLANTIC ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS

### The Foundation Prize

A prize of \$100 will be awarded for the best manuscript of 5,000 words or less, submitted by "interns, residents, and graduate students in Obstetrics or Gynecology or both, persons with an M.D. degree or a scientific degree approved by the Prize Award Committee who are engaged in research in other fields of medicine whose principal objective is directly concerned with problems in Obstetrics or Gynecology or both; provided that no Fellow of this Association, Active, Emeritus, or Honorary shall be eligible." The award will be made at the annual meeting of the association, at which time the prize-winning contribution will be read by the author as a part of the regular scientific program in conformity with the rules of the Association.

Announcement of the Foundation Prize was made by John C. Burwell, Jr., M.D., secretary-treasurer of Association, 416 Jefferson Building, Greensboro, North Carolina.

## AMERICAN HEART ASSOCIATION

Overcrowded classes in elementary schools and insistence on perfect attendance records are seen as hazards in guarding against rheumatic fever and rheumatic heart disease, which have been called "childhood's greatest enemy." Alertness by the teacher to early danger signals of poor health and understanding guidance of child and parent are recommended in a new booklet, *What the Classroom Teacher Should Know — and Do — About Children with Heart Disease*, published by the American Heart Association and its affiliates.

## THE AMERICAN NATIONAL RED CROSS

### Former Air Force Surgeon General Named To Head Red Cross Blood Program

Major General David Grant, USAF retired, noted Surgeon-General of the United States Air Force during World War II, has been appointed director of the National Blood Program of the American Red Cross effective May 1, it was announced recently.

Dr. Grant also will assume the duties of National Medical Director of the Red Cross, succeeding Dr. G. Foard McGinnes, who has resigned effective July 15.

Dr. Ross T. McIntire will continue to serve as chairman of the blood program Medical Policies and Procedures Committee, composed of prominent physicians.

Dr. Russell L. Haden who has been serving as medical director will become associate director and will be responsible for medical phases of the program.

In his new post Dr. Grant will direct all phases of the Red Cross Blood Program and be responsible for the further extension of the program to meet increased military and civil defense needs. The program now is providing blood for military requirements both domestically and abroad, and for civilian needs, as well as stockpiling plasma for national defense.

## INTERNATIONAL ACADEMY OF PROCTOLOGY

The third annual Convention of The International Academy of Proctology will be held at The Mayflower, in Atlantic City, New Jersey, on June 7, 8, 1951.

The scientific session of the program will feature the more recent developments in proctology through papers presented by outstanding speakers. These sessions will be open to members of the medical profession without charge.

The annual banquet of the Academy will take place on Thursday evening, June 7, 1951.

Further information concerning the convention and a copy of the program may be obtained by writing to the secretary, Dr. Alfred J. Cantor, International Academy of Proctology, 1819 Broadway, New York 23, New York.

## AMERICAN BOARD OF CLINICAL CHEMISTRY

The American Board of Clinical Chemistry, Inc., will hold its annual meeting in Chicago, May 25 and 26. At that time consideration will be given to applications for certification that have been filed with the Board. It is expected that the Board will proceed rapidly in the review of these applications.

Those interested in obtaining applications for certification may do so by forwarding a covering fee of \$1.00, together with their full name and address, to the secretary of the Board, Dr. Joseph W. E. Harrison, 1921 Walnut Street, Philadelphia 3, Pennsylvania. Further additional information may be had by consulting the *Chemical and Engineering News*, Volume 28, No. 51, December 18, 1950, pages 44-46.

## AMERICAN PUBLIC HEALTH ASSOCIATION

The seventy-ninth annual meeting of the American Public Health Association, the eighteenth annual meeting of its Western Branch, and the annual meetings of thirty-eight related organizations will be held simultaneously in San Francisco, October 29 to November 2.

The American Trudeau Society, medical section of the National Tuberculosis Association, has approved the administration of BCG vaccine to nurses, physicians and hospital attendants, who have negative tuberculin tests, because these individuals are almost constantly exposed to tuberculous infection from known and unknown tuberculous patients. It also approves BCG for (1) the Indians, (2) inmates and attendants in institutions for mental patients, and (3) in slum areas in certain large cities where proper housing and living conditions have not as yet been achieved. For the same reason it is justified as a temporary expedient in some countries where the tuberculosis death rate is high and facilities for isolation and treatment almost non-existent. The approval of the Trudeau Society for the use of BCG under these conditions was given with the full knowledge that only slight protection would be achieved and in no sense as a substitute for an adequate program of case finding, isolation, and treatment.—The NTA Bull., David T. Smith, M.D., March, 1951.

## CITIZENS COMMITTEE FOR THE HOOVER REPORT

The formation of a nationwide committee of doctors to support the recommendations of the bipartisan Hoover Commission in the field of health was announced recently by Dr. Robert L. Johnson, president of Temple University and national chairman of the Citizens Committee for the Hoover Report.

Dr. Robert Collier Page, general medical director of Standard Oil Company (New Jersey), was chosen at an organization meeting in New York recently as chairman.

The National Doctors Committee will have two major objectives: (a) to work for the conservation and fullest use of the nation's supply of trained doctors, nurses and technicians; and (b) the coordination of federal hospital facilities through a Federal Department of Health, as recommended by the bipartisan Hoover Commission.

To avoid misunderstanding of the aims of the committee, Dr. Page made this comment:

"A federal Department of Health will not mean 'socialized medicine' and it will not be 'just another government agency.' It will unite the facilities and resources of existing agencies; it will add efficiency, responsibility, singleness of operation and economy—in men, skills, and money."

It is expected that the committee will be active during Congressional consideration of the bills for the creation of a United Medical Administration recently introduced in Congress. Prominent doctors are ready to testify before Congressional committees considering these measures.

## DEPARTMENT OF DEFENSE

### Selective Service System Asked to Provide Military Services With Priority I Doctors

The Department of Defense recently asked the Selective Service System to provide the Priority I doctors of medicine required by the Military Services for July, August, and September, 1951. The call was placed because the number of Priority I doctors volunteering for commissions is not expected to meet the requirements.

The numbers requested are 717 for July, 333 for August, and 152 for September.

Priority I doctors are those who received their medical education at government expense, or were deferred from service during World War II to attend medical school, and who have served less than ninety days in the armed forces, the Coast Guard or the United States Public Health Service. The Selective Service Act requires that all available and qualified doctors of medicine in the first priority be called before doctors in Priority II are summoned.

If the number of Priority I doctors who volunteer increases, the number to be provided through Selective Service channels will decrease correspondingly.

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### 250 Medical Reserve Officers Ordered To Active Military Service By Army

The Department of the Army has announced that 250 medical officers of the Medical Service Reserve will be ordered into active military service during the month of May. The 250 officers are in Priority I as established by Public Law 779 of the Eighty-first Congress.

This is the second group of medical officers ordered into active military service by the Army since December 26, 1950, when 890 medical and 850 den-

tal officers were ordered to active service. During April, 300 medical and 100 dental officers were ordered to active service.

Officers will be given at least thirty days in which to close out personal and business affairs, unless they wish to report at an earlier date.

For the first time, the Department of the Army has called upon Army areas outside the continental limits of the United States to furnish medical officers in the present emergency. Puerto Rico will provide thirteen and Hawaii, five.

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### Navy Grants Funds for Research on Burns To Universities and Medical Schools

Ten universities and medical schools have received funds from the Navy Department to carry out a new program of research on "flash" burns—injuries which might result from exposure to an atom blast.

Prevention and treatment of flash burns, the Navy said, are of vital importance both to the military and to civilians. During World War II a high percentage of shipboard casualties were burns of the flash type. Burns took a high toll of victims of the atom bomb blasts in Japan.

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### Army Expands Social Service Work To Medical and Surgical Patients

Preparations are under way to expand the Army's social service work in hospitals to medical and surgical patients, the Department of the Army announced recently. Social service aid was formerly confined to work with neuropsychiatric patients.

Professionally trained social case workers will be employed in the Army program, both as officers and as civil service employees, according to Major General Raymond W. Bliss, the Surgeon General of the Army. Hospital commanders have been requested to encourage applications from qualified professional workers for Reserve commissions as well as civil service appointments.

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### General Bliss Reports on Medical Program

In comparison with World Wars I and II, the medical record in Korea is remarkable, Major General Raymond W. Bliss, Surgeon General, U. S. Army, declared after a tour of medical installations in Japan and Korea.

"Approximately 98 per cent of all wounded or ill soldiers who come to Army hospitals live, in comparison to World War I's rate of 92 per cent and World War II's rate of 95.5 per cent," General Bliss said.

"This enviable record has been accomplished through the able administrative and technical direction of the officers in charge of the medical program in the FEC, from the highest to the lowest rank. It shows great forethought, energy, and selfless devotion to duty and to the medical profession.

"Our troops are fighting in a country which is disease-ridden and where epidemics are common. Yet the sick rate of our troops in Korea is as low as with the troops in the United States. We have not had a single epidemic among the troops since they went in to Korea."

Most of the illnesses present in Korea are common colds and respiratory ailments, according to General Bliss. The remarkable record of low disease rate is accounted for by three main factors. He said the first is education—the soldier is taught self-care in the prevention of disease. Second is the immunization factor, accomplished by vaccinations which have been practically 100 per cent effective. Third is the sanitation factor, such as purification of water, care of food and cleanliness.

(BULLETIN BOARD CONTINUED ON PAGE 208)



# AUXILIARY

## WOMAN'S AUXILIARY TO THE AMERICAN MEDICAL ASSOCIATION

### PROGRAM

of the

TWENTY-EIGHTH ANNUAL MEETING  
ATLANTIC CITY, NEW JERSEY  
JUNE 10-15, 1951

HOTEL HADDON HALL

Mrs. David B. Allman, Chairman  
Committee on Arrangements

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A cordial invitation is extended to all members of the Woman's Auxiliary to the American Medical Association, their guests, and guests of physicians attending the convention of the American Medical Association, to participate in all social functions and attend the general sessions of the Auxiliary.

Headquarters will be at the Hotel Haddon Hall. Tickets will be available at the registration desk only. Please register early and obtain your badge and program.

### REGISTRATION HOURS

Sunday .....	12:00	M. to	4:00 P.M.
Monday .....	9:00 A.M.	to	4:00 P.M.
Tuesday .....	9:00 A.M.	to	4:00 P.M.
Wednesday .....	9:00 A.M.	to	4:00 P.M.
Thursday .....	9:00 A.M.	to	12:00 M.

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### PRECONVENTION SCHEDULE

Sunday, June 10

12:00 Noon to 4:00 P.M.—Registration—Lounge Floor—Haddon Hall. The members of the Hospitality Committee will welcome members and guests of the Woman's Auxiliary.

Monday, June 11

### ROUND TABLE DISCUSSIONS — TOWER ROOM (Thirteenth Floor)

9-10:00 A.M.—Program—Mrs. Harry F. Pohlmann, Chairman.

10-11:00 A.M.—Legislation—Mrs. Edgar E. Quayle, Chairman.

12-12:30 P.M.—Public Relations—Mrs. Theodore E. Heinz, Chairman.

2-3:00 P.M.—Today's Health—Mrs. Joseph W. Kelso, Chairman.

4:00 P.M. to 6:00 P.M.—Tea honoring Mrs. Arthur A. Herold, president, and Mrs. Harold F. Wahlquist, president-elect, will be given for the members of the Board of Directors, the state presidents and presidents-elect, and guests. Benjamin West Room (thirteenth floor). Tickets \$2.00 (tax and gratuity included). Hostesses: The Woman's Auxiliary to the Medical Society of New Jersey. All doctors' wives are cordially invited.

### CONVENTION PROGRAM

Tuesday, June 12

9:00 A.M.—Formal opening of the twenty-eighth annual meeting of the Woman's Auxiliary to the American Medical Association, Vernon Room, Lounge Floor.

12:30 P.M.—Luncheon in honor of the past presidents of the Woman's Auxiliary to the American Medical Association, Rutland Room, Lounge Floor. Tickets \$3.00 (tax and gratuity included). Mrs. Arthur A. Herold, president, presiding. Guest speaker: Mr. Ed Lipscomb, Director of Public Relations, National Cotton Council, Memphis, Tennessee.

### Afternoon Session

2:00 P.M.—Report of the Board of Directors.

8:00 P.M.—Opening meeting of the American Medical Association (place will be announced later). Members of the Woman's Auxiliary and guests are cordially invited.

Wednesday, June 13

9:00 A.M.—General Session of the Woman's Auxiliary to the American Medical Association, Vernon Room.

12:30 P.M.—Annual Luncheon in honor of Mrs. Arthur A. Herold, president, and Mrs. Harold F. Wahlquist, president-elect, Rutland Room (first floor). Tickets \$3.00 (tax and gratuity included). Mrs. David W. Thomas, past president, presiding. Guests of honor: Dr. Elmer L. Henderson, president, American Medical Association; Dr. John W. Cline, president-elect; Dr. Louis H. Bauer, chairman of the Board of Trustees; Dr. R. B. Robins, vice president; Dr. George F. Lull, secretary and general manager; Dr. Ernest B. Howard, assistant secretary; Dr. J. J. Moore, treasurer; Dr. F. F. Borzell, Speaker, House of Delegates; Dr. Austin Smith, editor; and the members of the Advisory Council to the Woman's Auxiliary.

3:00 P.M.—Afternoon Session.

Thursday, June 14

9:00 A.M.—General Session of the Woman's Auxiliary to the American Medical Association, Vernon Room. Presiding, Mrs. Arthur A. Herold.

### Afternoon Session

2:00 P.M.—Meeting of the Board of Directors, Rowsley Room (first floor). Presiding, Mrs. Harold F. Wahlquist.

7:00 P.M.—Annual Dinner of the Woman's Auxiliary to the American Medical Association for members, husbands and guests, Vernon Room (lounge floor). Tickets \$5.00 (tax and gratuity included). Dress optional. Presiding, Mrs. David B. Allman.

9:00 P.M.—Reception and Ball in honor of the president of the American Medical Association (place will be announced later).

Friday, June 15

10:00 A.M.—Conference of national officers, directors, national chairmen of standing committees and state presidents and presidents-elect, Garden Room (lounge floor). Presiding, Mrs. Harold F. Wahlquist.

## Classified Advertisements

**WANTED:** For North Carolina location, young physician for general practice and assist in surgery. Liberal salary first year and then percentage. Send credentials of training. Wonderful opportunity for immediate income and training. Must be military exempt for 1 year. Interview required.

**EAR, NOSE, and THROAT SPECIALIST:** Board qualified, wishes association with older, established specialist in ENT or EENT. Can do: allergy, plastic and neck surgery, and bronchoesophagology in addition to classical ENT. Would consider group offer.

## BOOK REVIEWS

**Pediatric Allergy.** By Robert Chobot, M.D., 284 pages. Price, \$4.50. New York: McGraw-Hill Book Company, 1951.

For some time there has been need for a text devoted to the field of pediatric allergy. The successful management of allergic children demands a special understanding of their problems. Only disappointment will follow attempts to apply, unmodified, the techniques of adult allergy to these children. In this new book, Dr. Chobot has pointed out many of these special problems. He stressed particularly the importance of the history and warned against accepting the results of skin-testing when they are at variance with the history. A judicious selection of tests is much preferable to wholesale testing.

Much of the material in this book will be open to argument, such as the author's strong support of intradermal testing over scratch testing. It would seem, however, to be more a matter of training, since a good case can be made for either side.

It is disappointing to find the role of psychogenic factors brushed aside in a discussion of the etiology of allergic states. Surely one can accept psychogenic factors in allergic states without denying the role of the antigen-antibody reaction. To this reviewer, Dr. Chobot's discussion reveals a complete lack of understanding regarding psychosomatic illnesses.

He predicts (and rightly so) that pediatricians will object to the stress placed upon the role of "foci of infection" in allergy. Again, however, the discussion is largely a matter of semantics, for all pediatricians recognize a relation between infection and allergic disease. It is to be hoped, however, that they do not feel that all will be well after the removal of a child's tonsils and adenoids. Dr. Chobot points out that eczema is self-limited, and warns against the dangers of attributing improvement to any particular therapeutic regimen. Unfortunately, he falls into this same trap with a statistically insignificant report on foci of infection and some isolated case reports. One can easily admit the importance of respiratory infection without dragging in the unsound practice of tonsillectomy in infancy.

On the whole, this is a disappointing book. Whereas it contains much of value, the evident lack of the scientific approach casts doubt on some of the author's conclusions.

**Pioneer Doctor.** By Lewis J. Moorman, M.D. 250 pages. Price, \$3.75. Norman, Oklahoma: University of Oklahoma Press, 1951.

This is just the sort of autobiography that the friends of Dr. Moorman would expect him to write. It is well written, entertaining, philosophical, and thoroughly modest. He well describes it in the preface: "The unadorned story of a doctor who traveled to the country in Oklahoma at the turn of the century with three questionable assets: a medical diploma, a desire to see the West, and an inferiority complex."

Although Dr. Moorman's professional attainments have been many and noteworthy, most of the book is devoted to human interest stories about his patients, especially those of the plains. The chapters on the psychology of the tuberculous patient and on medical education are particularly stimulating, and are based upon a rich experience both in treating tuberculosis and in medical education. Quite timely is his discussion of training general practitioners. Many others have recently shared his view that "In this respect the problem of the medical schools might be partially solved if the various

specialty boards required every applicant to have three to five years in general practice before official certification."

This little book can be heartily recommended to doctors and laymen alike. It is the sort of writing that is calculated to improve greatly the public relations of the medical profession.

**Methods in Medical Research, Volume 3.** Edited by Ralph W. Gerard, professor of Physiology, University of Chicago. 312 pages. Price, \$7.00. Chicago: The Year Book Publishers, 1950.

This is the third volume in a notable series which is to continue with the publication of one volume each year. The first three are rather specialized and detailed works dealing with the techniques in various fields of medical research.

The present volume is in four sections: Genetics of Micro-Organisms, edited by S. E. Luria; Assay of Neurohumors, edited by J. H. Gaddum; Selected Psychomotor Measurement Methods, edited by Walter R. Miles; Methods for Study of Peptide Structure, edited by Choh Hao Li. Each of these editors is a well recognized authority in his field.

**Methods in Medicine.** The Manual of the Medical Service of George Dock. By George R. Herrmann, M.D., Ph.D., Professor of Medicine, University of Texas; Director of the Cardiovascular Service and Heart Station, University of Texas Hospitals; Consultant in Medicine to the Surgeon General, United States Army. 488 pages. Price, \$7.50. St. Louis: C. V. Mosby Company, 1950.

The author describes this book as a comprehensive outline for the clinical investigation, management, and treatment of patients with various medical disorders. The work is dedicated to George Dock, master clinician, as a *Festschrift*, in honor of his ninetieth birthday.

When originally published in 1924, this was the manual of George Dock's medical service at Barnes Hospital in St. Louis, and embodied many of the ideas of Henry A. Christian and William Osler. Dr. Herrmann has almost completely rewritten the manual to bring it completely up to date. It is divided into five parts, under the following headings: Methods of Routine Case Study; Clinical Laboratory Procedures and Tests; Methods of Clinical Investigation; Therapeutic Methods; Dietetic Methods.

The book should serve as a useful reference for the medical student and busy practitioner.

**Current Therapy, 1951.** Edited by Howard F. Conn, M.D., 699 pages. Price, \$10. Philadelphia: W. B. Saunders Company, 1951.

There has been little change in the content or form of this work from the two preceding editions. Forty-nine contributors are represented, and eighty-six methods of therapy are new; others have been significantly revised. An effort has been made to keep abreast of the rapid advances in the chemotherapy of infectious disease. The use of ACTH and cortisone is noted only briefly, since their place in therapy has not been well established. No illustrations or bibliography are included, and obsolete or unusual methods of therapy are omitted. The book should prove very helpful for the busy practitioner, who will find it concise, readable, and well indexed.



## In Memoriam

DR. PAUL ALLISON YODER  
(1895-1951)

WHEREAS, it has pleased our Heavenly Father in His infinite wisdom to take from our midst our beloved fellow-member, Paul Allison Yoder, be it therefore

RESOLVED, that we, members of the North Carolina Tuberculosis Association, do deeply deplore his death; and be it further

RESOLVED, that these resolutions be spread upon the minutes of the Association and that a copy be furnished the wife of the deceased.

Dr. Paul A. Yoder was born March 9, 1895, at Hickory, the son of Dr. Robert A. and Rosa Fisher Yoder. He was educated at Lenoir-Rhyne College, the University of North Carolina, and the University of Pennsylvania, receiving his M.D. degree in 1923. After a year's internship at Bryn Mawr Hospital, he immediately entered his chosen field of tuberculosis work, and from 1924 until the day of his death he waged unrelenting warfare against that disease. He was associated with the North Carolina Sanatorium one year as resident physician and four years as clinical physician.

In 1929 he became superintendent of Forsyth County Sanatorium, where he spent the remaining years of his life. Dr. Yoder retired from full active duty because of ill health in 1949, but continued to do some work, as consultant on the staff of the sanatorium, until February 12, 1951. That afternoon while examining a patient, he was suddenly called to come up higher.

Paul Yoder, my friend and fellow worker for more than twenty years, was recognized by both the laity and the profession as a leader in the fight against tuberculosis. He was specially skilled in the diagnosis of this disease. He was energetic, sincere, studious, devoted to his patients and to his work with them, loyal to the institution he served, and cooperative in the highest degree with other agencies with which he worked.

Honors came to him. He was elected to fellowship in the American College of Physicians, was a diplomate on the American Board of Internal Medicine; served on the Board of Medical Directors, and was a member of the American Trudeau Society and the National Tuberculosis Association. He was a member of local, state, and national medical societies. He served several years as secretary of the Forsyth County Medical Society and as its president for one year. He was president of the Forsyth County Tuberculosis Association and also of the North Carolina Tuberculosis Association, and was an active member of its board of directors for many years. He was a co-author of *The Handbook of Diagnostic Standards of the National Tuberculosis Association*.

Paul Yoder was not only a good doctor; he was a good citizen and a Christian gentleman. He was an active member of the Rotary Club, and took an interested part in all civic undertakings. He was a faithful, loyal member of the Lutheran Church.

He was loved by all who knew him, but especially by the men and women of Forsyth Sanatorium. His great ability as a teacher, his contagious optimism, his smile that chased gloom away, and his sympathy inspired and encouraged them.

He had much to do with the development of a sound tuberculosis program in Forsyth County and in the whole State of North Carolina. Nothing pleased him more than to note the steady advancement against tuberculosis in our state—the pro-

vision of additional hospital beds here and there, and the increase in the number of local tuberculosis organizations through the years.

Dr. Paul Yoder had a part in all of this. He was a success. In closing, may I quote Stanley's poem entitled "Success"?

"He has achieved success who has lived well,  
Laughed often, and loved much;  
Who has gained the respect of intelligent men  
And the love of little children;  
Who has filled his niche and  
Accomplished his task;  
Who has left the world better than he found it,  
Whether by an improved poppy, a perfect poem,  
Or a rescued soul;  
Who has never lacked appreciation of earth's  
beauty  
Or failed to express it;  
Who has looked for the best in others and given  
The best he had;  
Whose life was an inspiration;  
Whose memory a benediction."

—R. L. Carlton.

### Scientist and Artist

At his highest, the physician is both scientist and artist. Of the two, the artist is the greater because while science is discovery, art is creative. The greatest of all arts is the art of life itself. This concept of the artist is the needed formula for education—one who has acquired technique by the discipline of science and wisdom by the study of the humanities. The art and science of medicine, a profession wherein technical skill and compassionate understanding are brought to the bedside in even balance, may point the way for the educationalists in all fields to achieve the desired integration. Even as the true artist is creative, so is the physician whenever he, with complete equipment of material and spiritual resource, establishes with his patient that unique individual relationship which is the most precious of his achievements. —Van Wyck, H. D.: *The Role of the Humanities in Medical Education*, *Canad. M.A.J.* 64:260 (March) 1951.

Mass case finding in hospitals can be effective if applied to two groups—admissions and personnel. It is known that our medical and nursing personnel are only too often exposed to active cases of unknown tuberculosis. This is especially hazardous in the general hospital since the prophylactic nursing techniques usually fall short of those required in a communicable disease institution. The incidence of tuberculosis among doctors and nurses is already several times that of comparable age groups in the general populations, and they should not be needlessly exposed when the method of detection is so readily available.—Hospital Council of Greater New York and New York Tuberc. & Health A., 1950.

### Tuberculosis Control

Generally speaking, mortality is not a good criterion of immediate accomplishments in tuberculosis control because the majority of deaths from this disease is the result of infections which occurred long before. Therefore, for many years after an excellent tuberculosis control program is instituted in a given community, mortality may remain high among those who were infected previously.—*Journal-Lancet*, J. Arthur Myers, M.D., 1950.

## BULLETIN BOARD

(CONTINUED FROM PAGE 204)

### FEDERAL SECURITY AGENCY

A recent decision of the Supreme Court of the United States, which invalidates a provision of a local ordinance restricting the sale of milk not pasteurized within five miles of the city center, may have far-reaching effects on restrictive milk ordinances throughout the United States, Surgeon General Leonard A. Scheele of the Public Health Service, Federal Security Agency, said recently.

"I am gratified by the Supreme Court's decision of January 15, because it upholds the milk ordinance and code recommended by the Public Health Service as one of two alternatives communities may adopt to protect the quality of milk they receive from other states," Dr. Scheele said.

The Surgeon General referred to a decision by the Supreme Court in which it vacated judgment and remanded to the Supreme Court of Wisconsin the case of the Dean Milk Company of Illinois versus the City of Madison. In so doing, the Supreme Court invalidated a section of the Madison ordinance which makes it unlawful to sell milk as pasteurized unless it is processed and bottled at an approved pasteurization plant within five miles from the central square of the city.

The Court said the ordinance "in practical effect excludes from distribution in Madison wholesome milk produced and pasteurized in Illinois."

"In thus erecting an economic barrier protecting a major local industry against competition from without the State, Madison plainly discriminates against interstate commerce," the Court said.

The case was remanded to the Wisconsin Supreme Court because it had not passed on another pertinent section of the Madison ordinance, a section which relieves local authorities from any statutory duty to inspect farms located beyond twenty-five miles of the center of the city.

The Supreme Court of the United States remanded the case to the State court for a determination on the validity of this section, "not inconsistent with the principles announced" with respect to the five-mile limitation.

"If communities throughout the country were to heed the implications of the Supreme Court's decision in this case, we might soon see an end to the 'Chinese walls' which are hampering the adoption of uniform milk sanitation practices among the States," Dr. Scheele explained.

In reaching its decision, the Supreme Court found that Madison, "even in the exercise of its unquestioned power to protect the health and safety of its people," cannot, by its ordinance, discriminate against interstate milk shipments "if reasonable nondiscriminatory alternatives, adequate to conserve legitimate local interests, are available."

Dr. Scheele noted that the Court pointed to the existence of two such alternatives. They are:

1. The city may rely on its own officials for inspection of distant milk sources and charge the cost of the inspection to the importing producers; or,
2. The city may adopt the milk ordinance and code recommended by the Public Health Service, which, the Court said, "imposes no geographical limitation on location of milk sources and processing plants but excludes from the municipality milk not produced and pasteurized conformably to standards as high as those enforced by the receiving city."

Dr. Scheele said the receiving city may determine the extent of enforcement of sanitary standards in the exporting area by verifying the accu-

racy of ratings of specific plants, or of the milkshed, through the Public Health Service's spot checks of local ratings.

In referring to the Court's finding that the Madison ordinance must yield to the general principle that one State in its dealing with another may not place itself in a position of economic isolation, the Surgeon General said:

"The Supreme Court has set a precedent which may do more to make uniform the pattern of milk control throughout the United States than any action taken in recent years.

"Any regulation which interferes unnecessarily with the free flow of milk and milk products tends to increase the price paid by the consumer and, in turn, to reduce the amount consumed," he explained.

Dr. Scheele also said:

"The effect is particularly serious among low-income families who can afford little milk for their children. Therefore, although health officials are concerned primarily with cleanliness and safety of milk, not with its price, they are compelled to recognize price when it begins to affect the nutritional status of the public.

"There should be nothing in a local ordinance which would tend to restrict shipments of milk or milk products into a municipality from any point within or without the State if the product complies with satisfactory local health standards."

"Unfortunately," he added, "there are still some communities which have regulations that contain provisions not essential for health protection, and these are serving as barriers to the normal flow of milk."

The Surgeon General explained that the Public Health Service has been promoting uniformity among State and local milk sanitary regulations since 1923, when its recommended milk ordinance was first introduced. Today, he pointed out, nearly 60 million Americans reside in areas which have voluntarily adopted this ordinance.

The Madison ordinance was brought before the Wisconsin Supreme Court approximately two years ago, when its constitutional validity was attacked by the Dean Company, which had been denied a license to sell its products within the city solely because its pasteurization plants were more than five miles out of the city. The Court noted that the Dean Company at that time purchased and gathered milk from approximately 950 farms in northern Illinois and southern Wisconsin, none of which was within 25 miles of Madison. None of its pasteurization plants was nearer than 65 miles from the city.

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Appointment of Dr. Katherine Bain and Melvin A. Glasser as associate chiefs of the Children's Bureau has been announced.

Dr. Bain was formerly director of the Division of Research in the Bureau, and Mr. Glasser was executive director of the Midcentury White House Conference on Children and Youth. Dr. Bain will serve as associate chief for program development both in the Bureau's research work and in its administration of grants to states for child health and welfare. She will also carry responsibility in the maternal and child health field formerly carried for many years by Dr. Martha M. Eliot, and most recently by Dr. Leona Baumgartner.

Mr. Glasser will serve as associate chief for state and community relations. He will work with state planning groups in putting objectives of the White House Conference into action. He also will work with state and national groups in the development of community programs for children and youth, with emphasis on integrating community resources in health, welfare and education.



# NORTH CAROLINA MEDICAL JOURNAL

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## ANESTHESIA IN THORACIC SURGERY

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FRANCIS J. AUDIN, M.D.

EDWARD K. ATKINSON, M.D.

BOSTON, MASSACHUSETTS

Thoracic surgery and anesthesia are interdependent. Increasingly complicated surgical procedures demand new methods and agents for anesthesia. New anesthetic techniques permit, or even stimulate, more hazardous types of surgery. The duties of the anesthesiologist also have changed with the new trends. He is as essential a part of the team as the surgeon.

For many centuries the surgeon, haunted by the ghost of Celsus, was afraid to enter the pleura. Nearly two thousand years ago Celsus, in discussing surgical anatomy on the living criminal, stated: "It is indeed true that the abdomen, with which our argument is less concerned, can be opened while the man yet lives; but as soon as the knife reaches the thorax and cuts the transverse septum (diaphragm) the man at once gives up the ghost . . ." <sup>(1)</sup>

When Meltzer and Auer <sup>(2)</sup>, in 1910, introduced their method of intratracheal insufflation for the prevention of operative pneumothorax, the sonic barrier of thoracic surgery was pierced. With subsequent methods of control of respiration or respiratory physiology, the transition from fear of the thoracic cavity to the present day exploration into the realm of intracardiac surgery has been accomplished. A great future in intracardiac surgery lies ahead. The anesthesiologist, will play no small part in this future.

What are some of the specific responsibilities delegated to the anesthesiologist? How does he cope with them? What constitutes anesthesia for thoracic surgery as now practiced?

In many instances the anesthesiologist acts

From the New England Deaconess Hospital, Boston, Massachusetts.

in a consultant capacity in the preoperative preparation of the patient. He must be familiar not only with the patient's physical state, but also with the contemplated procedure. His preoperative findings may influence the degree of surgery, and will certainly influence the choice of agent and the management of the anesthesia. He should also have the major responsibility for managing the physiologic problems that arise during the operation. Frequently he is consulted in the management of the immediate postoperative convalescence of the patient.

### *Preoperative Preparation Evaluation*

Patients are arbitrarily grouped into four classes of risk. Every factor that might affect the ultimate outcome of the anesthesia and the operation is considered in evaluating a prognosis or risk. Risk I includes patients with noncomplicating factors other than the primary disease process, such as pulmonary cysts, spontaneous pneumothorax, neurofibromas or pulmonary adenomas, and Raynaud's disease.

Classified as Risk II are patients with some moderately unfavorable factor which may be the result of the primary pathology or independent of it. In this group are patients with early tuberculosis or other lung disease; gastric ulcers or early carcinomas; other gastrointestinal lesions, either with or without associated anemia; hypertension, with early kidney or vascular complications; cardiac or vascular anomalies, such as ductus arteriosus or coarctation of the aorta. Also included are patients with moderate to severe systemic complications in no way related to the primary pathology, such as diabetes mel-

litus, nephritis, cardiovascular diseases and severe anemias or other blood dyscrasias.

The label "Risk III" is a danger signal, and means that the patient is in such poor condition that any depressing form of anesthesia or shock-producing type of operation should be avoided, if possible. Examples are patients with extensive bilateral tuberculosis, bronchiectasis or lung abscess; patients with any marked wasting or inanition associated with severe anemia; and patients with serious cardiac complications, such as recent coronary occlusion, cardiac decompensation, or other severe cardiac embarrassment, such as is noted in constrictive pericarditis. Patients with intractable asthma or other pulmonary diseases and marked diminution in vital capacity are placed in this group, as well as those with severe anemia, from or following profuse gastrointestinal hemorrhages, and patients who are emaciated from an obstructive esophageal lesion. Patients with severe to uncontrollable diabetes mellitus are also placed in group III.

Risk IV designates patients for whom a fatal outcome may be expected. In these cases, the operation must be chanced even though the patient is not likely to survive.

#### *Knowledge of the surgical procedure*

Not only is the proper evaluation of the patient's physical state important in the proper management of the anesthesia, but also a knowledge of the contemplated surgical procedure. Thoracic surgical procedures may be divided into minor and major operations. Among the minor procedures are included rib resections, stage thoracoplasty, nerve crushings, and simple thoracotomy. In the group of major procedures are such operations as exploratory thoracotomy, lobectomy, pneumonectomy, pleural decortication, transpleural drainage of lung abscesses, transthoracic removal of mediastinal tumor, transthoracic ganglionectomy, esophageal and gastric resection, vagotomy, and all types of cardiac surgery.

#### *Review of the clinical findings*

As consultant in the preoperative preparation of the patient, the anesthesiologist frequently acts as the watchdog of the surgical team. A preoperative visit the night before the operation has three purposes. First, he usually checks all recent physical and laboratory findings. If pertinent information is

missing, he makes certain that it is available before the start of the operation. He also checks on the supportive therapy. Second, he helps to prepare the patient psychologically for the contemplated anesthesia and operation. Third, he orders important medications to improve the anesthesia or protect against untoward reactions that might arise during anesthesia or operation.

The presence of an intercurrent or superimposed recent, acute, upper respiratory infection may necessitate postponing the operation. Occasionally, certain urinary findings indicate the necessity of further medical therapy in diabetic or nephritic conditions. Recently, one of our patients with carcinoma of the lung began to manifest neurologic signs of paralysis, necessitating a decompression laminectomy for a metastatic lesion.

#### *Avoidance of cardiovascular complications*

The cardiovascular system is of particular interest to the surgeon, internist, and anesthesiologist, especially in contemplated thoracic surgery and anesthesia. The cardiac complications are the most spectacular and hazardous, especially those occurring during operation. Frequently, their occurrence is due to an oversight in the preoperative preparation.

In reviewing the chief cardiac complications and recommendations for supportive therapy for the prevention of these cardiac complications, Dr. Bland<sup>(3)</sup>, cardiologist at the Massachusetts General Hospital, reported a total of 141 patients operated upon for carcinoma of the esophagus, 33 of whom had complications. Eleven patients had auricular fibrillation; 3 had auricular flutter; 14 had congestive heart failure; and 5 had myocardial infarction, or coronary thrombosis. In this series, 23 patients did not survive postoperatively. Nine patients died of congestive heart failure; 2 died of myocardial infarction; and 12 died of other causes.

Dr. Bland's recommendations for safeguarding against the following four serious cardiac complications are as follows: *Arrhythmia, auricular fibrillation or flutter*: Quinidine should be used routinely in all thoracic surgical procedures. In cases of infarct, it should be mandatory. In oral administration, the dose is 0.2 Gm. (3 grains) of quinidine sulfate. For intramuscular administration, the dose is 0.15 Gm. of quinidine lactate. One dose is given one hour preoperatively. Post-



operatively, quinidine is given three to four times daily for three to four days.

In *congestive heart failure*, saline is avoided. Too much saline will water-log the lung, and the clinical findings resemble those of bronchopneumonia. Five per cent dextrose in distilled water is the intravenous fluid of choice. During anesthesia the patient must be given an abundance of oxygen. Care should be taken to avoid excitement during the induction phase of anesthesia.

Because of the danger of *myocardial infarction*, the hemoglobin should be up to or near normal levels. To guard against a possible coronary attack on the operating table, these patients must have adequate oxygen. It is necessary to avoid a sudden or severe drop in blood pressure. Finally, any excitement during the induction phase of anesthesia should be avoided.

*Mitral Stenosis*: Patients with this complication are prone to have pulmonary edema because of the back pressure on the pulmonary circulation. Pulmonary edema is seen frequently during menses in young women who may not even know that they have cardiac disease. In these patients with mitral stenosis, surgery should be avoided around the menstrual period. Therapy should include a low sodium diet pre- and post-operatively, diuretics, digitalis, and quinidine, given as a prophylaxis against fibrillation. It is important to avoid an excess of intravenous fluids—even blood—in these patients during an operation. Last but not least, psychic trauma should be avoided; it is wise to use a basal anesthesia in the patient's room before moving him to the operating theater.

These are but a few of the preparations that are carried out, either as routine precautions, or as the result of the physical and laboratory findings noted in the detailed examination of the patient's record.

#### *Psychologic Preparation*

Many patients fear the anesthesia more than they do the operation. A preoperative visit by the anesthetist acquaints the patient with the doctor who is going to "keep him alive," and also with the contemplated agent and method of anesthesia. It gives him an opportunity to unburden himself of subconscious or concealed worries. After such visits, many patients are reassured by the familiar presence just before they lose consciousness

in the strange surroundings of the operating room.

#### *Preoperative medication*

The third function of the anesthesiologist in the preoperative preparation of the patient is the ordering of medications. The purposes of preoperative medication are five in number: (1) to induce psychic sedation and minimize excitement and anxiety; (2) to decrease metabolism, thus lessening oxygen demand; (3) to diminish mucus and other secretions, thus facilitating both anesthesia and adequate oxygenation of the patient; (4) to provide prophylaxis against the undesirable side effects of some of the drugs used in anesthesia; (5) to raise the threshold for reflex sensory pain stimuli from the operative area. Under ideal medication the patient is calm and drowsy, but not stuporous. Respiration and blood pressure are not depressed. He is cooperative, but amnesic to pre-anesthetic surroundings.

In order to approach this ideal, all the physical and psychic factors previously investigated are considered. Such factors as age, loss of weight, the duration and degree of the primary disease process, the degree of vital capacity, or the presence of liver or kidney complications may restrict the premedicant requirement. Patients with high metabolic activity require heavier narcosis than the average for their age and weight. Aged or debilitated patients should be limited to small doses of respiratory depressant drugs, in order to avoid unduly depressing the blood pressure and thus contributing to operative shock. Children usually require relatively large doses for their age and weight. Occasionally, an opiate might precipitate gastric disturbances. Naturally, the psychic state or temperament of the patient also influences drug requirements.

The drugs usually employed fall into three general classes—the opium derivatives, the barbiturate derivatives, and the belladonna derivatives.

The opium derivatives, by allaying pain, inhibit metabolic elevation. Also, by enhancing the effect of the soporific drugs, they facilitate sleep and thus reduce emotional excitement.

The barbiturate derivatives, in the usual doses recommended as premedicants, act by allaying emotional excitement. Occasionally, they may produce delirium in the absence of pain and, when used alone, usually produce

delirium in the presence of pain. They afford pharmacologic protection against the toxic effects of regional or topical anesthetics.

The belladonna derivatives diminish secretion. They lessen the cardiac response to reflex vagal activity. As direct metabolic stimulants, they tend to antagonize the respiratory-depressive phases that may result from the opium or barbiturate premedicant. Scopolamine, as contrasted to atropine in this group, has the added effect of producing amnesia to present surroundings.

Risk I and II patients about to undergo a minor procedure under regional anesthesia receive 0.2 Gm. (3 grains) of Nembutal by mouth two hours preoperatively, and 10 to 16 mg. (1/6 to 1/4 grain) of morphine sulphate, plus .45 mg. (1/150 grain) of atropine sulphate subcutaneously, one and one-quarter hours preoperatively. Patients in these groups who are to undergo a general anesthesia receive 0.1 Gm. (1/2 grain) of Nembutal by mouth two hours before surgery, and 10 mg. (1/6 grain) of morphine and 0.6 mg. (1/100 grain) of atropine subcutaneously, one and one-quarter hours before surgery.

In Risk III and IV patients, these premedicant doses are highly specialized, either for major or minor surgery. The usual orders call for a small amount of opium derivative (8 mg. of morphine), moderate doses of atropine (0.45 mg.), given subcutaneously one hour preoperatively, and no barbiturate. We feel that the vago-inhibiting action of atropine is nil in doses smaller than 0.6 mg. administered subcutaneously.

We eliminate barbiturates in patients for whom we plan either a Sodium Pentothal or cyclopropane induction of anesthesia. Where Pentothal is to be the primary agent Nembutal is omitted, as there is the danger of a cumulative effect. In cyclopropane anesthesia, the combination of cyclopropane and barbiturate may result in a prolonged and frequently respiratory-depressed induction of anesthesia. To safeguard against the hazard of the second or delirium stage in anesthesia, we tend to use greater concentrations of cyclopropane, plus reinforced breathing, in order to obtain a more rapid induction or passage into the third stage of surgical anesthesia.

#### *The Choice of Agent and Method of Anesthesia*

The agents employed in thoracic anesthesia

are usually classified as explosive or non-explosive. In general, the methods are classified as inhalation, intravenous or regional. In the management of anesthesia, we frequently use a mixture of agents as well as a combination of methods. Naturally, all the agents employed in the intravenous or regional methods are in the nonexplosive class.

#### *Inhalation*

Three nonexplosive agents are included in the inhalation group: nitrous oxide, chloroform, and trichlorethylene. Chloroform and trichlorethylene can be immediately eliminated, as both are too toxic, on both the heart and liver. Nitrous oxide-oxygen used alone is definitely inadequate, unless we permit a state of hypoxia or oxygen-want. When used as a supplement in a regional or intravenous combination, much higher concentrations of oxygen are available; therefore, this combination has a place in thoracic anesthesia. The remaining agents usually employed in inhalation anesthesia are ethylene, cyclopropane, and divinyl ether or ethyl ether.

*Ethylene*, like nitrous oxide, is a poor-potency gas, and is explosive in its intermediate concentrations during induction and emergence.

*Divinyl ether* is rarely used except in a short procedures. Its advantages are rapid induction and quick and somewhat pleasant recovery, with less irritation to the respiratory tract than that caused by ethyl ether. Its immediate effectiveness is one of the chief disadvantages in a prolonged anesthesia. Also, in the presence of oxygen-want there may be danger of liver damage—possibly acute yellow atrophy.

In combination, each of the two remaining inhalants tend to lessen the disadvantages of the other.

*Cyclopropane*: The induction of cyclopropane is usually rapid and somewhat pleasant; it is odorless, and permits the use of high oxygen concentrations. The oxygen concentrations can be maintained even in deep surgical anesthesia, because of the potency of the gas. To the surgeon, the chief advantage is the quiet breathing associated with this type of anesthesia, facilitating intrapleural surgical procedures.

Cyclopropane has the following disadvantages: It is quite explosive in the usual anesthetic concentration; it is prone to increase the irritability of the cardiac muscles, thus,



in the presence of epinephrine, tending to precipitate cardiac irregularities and the most dangerous, ventricular fibrillation. It is thought by many to increase the degree of capillary oozing and blood loss.

*Ethyl ether*: The outstanding advantage of ethyl ether is that it acts upon the brain. Thus, in the presence of adequate oxygen and in the absence of complicating reflexes it of all inhalation agents has the widest margin of safety. Under the above conditions, the respiration ceases before the heart stops beating.

Cardiac cessation is usually the result of anoxia or severe untoward systemic reflexes, precipitated either by the surgery or by anoxia. Ether, through its action on the central nervous system, is the only inhalant agent that depresses an irritated carotid sinus or associated reflexes that might initiate cardiovascular complications, or even cardiac arrest. In the hands of the less experienced, the depth of anesthesia is more easily determined, owing to the specific signs discernible in the respective stages of ether anesthesia.

The disadvantages are as follows: The irritant effect upon the respiratory tract may cause reflex coughing and other laryngeal complications, such as spasm; also, it may increase secretions through the stimulation of the glands of the respiratory mucosa. The degree and duration of the postoperative nausea and vomiting usually associated with ether is dependent upon saturation of the body tissue. It reportedly has a deleterious effect on patients with diabetes mellitus, because of glycogen disturbance in the liver. We believe that many disadvantages attributed to ether are due not primarily to the agent but rather to a degree of hypoxia usually associated with the poor management of the anesthesia.

Our group administers the anesthetics to the Joslin Diabetic Clinic patients undergoing surgery. Approximately 60 per cent of these patient receive ether as a primary anesthetic agent. Certainly, the long and extensive experience of the Joslin group would influence our choice of anesthesia. We have encountered very little reflex coughing and spasm or excessive secretion in patients undergoing a cyclopropane induction, with ether employed as the primary anesthesia.

#### *Intravenous Methods of Anesthesia*

In some institutions the use of cyclopro-

pane is prohibited for two reasons: (1) it is explosive, and (2) it is a serious cardiac irritant. Where cyclopropane is prohibited, the common practice is a combination of an intravenous and inhalation anesthesia. It may be a Sodium Pentothal-nitrous oxide-oxygen induction, with a gradual shift to an ether anesthesia. It may be the combination of Sodium Pentothal-nitrous oxide-oxygen alone. Again, it may be the combination of Pentothal, curare, or a curare-like agent, and nitrous oxide-oxygen. The last two combinations are nonexplosive.

Some authorities have the mistaken impression that the nitrous oxide-oxygen-ether combination is less explosive than a combination of cyclopropane, oxygen and ether. It has been demonstrated<sup>(4)</sup> that the former is explosive and that there is little clinical difference in the degree of explosiveness. As far as the patient is concerned, any explosion in a closed circuit will produce enough of a blast phenomenon to damage the lung so seriously that the patient will die from hemorrhage. In our opinion, the only valid criticism of cyclopropane lies in its cardiac irritant effect. The protective therapy against this effect has already been discussed under preoperative preparation.

Some anesthesiologists enumerate the following advantages in the use of Pentothal, Pentothal-curare, or Pentothal-Syncurine combinations as agents for anesthesia in thoracic surgery. (1) Such combinations are nonexplosive. (2) The diminished-to-absent voluntary respiratory excursions resulting from these agents afford ideal operating conditions within the thoracic cage. When these combinations are thus employed, the anesthesiologist maintains adequate oxygenation of the patient by a controlled passive breathing technique. It is their opinion that under adequate oxygenation, no cardiac or vascular changes develop. Onset of arrhythmia or falls in blood pressure are noted only with severe or sudden loss of blood. The important disadvantage is the danger of hypoxia, oxygen-want, or hypercapnia, (accumulation of carbon dioxide) that might result from inadequate control.

Pentothal is a depressant of the central nervous system, and its peripheral action tends to result in bronchiolar constriction as well as laryneal spasm. In rare instances, curare or d-tubocurarine may precipitate a severe bronchiolar spasm.

Syncurine (decamethonium bromide), a

synthetic muscle relaxer, does not have this histamine-like side effect. The danger of this particular drug lies in its potency. Small quantities may result in sudden, complete cessation of respirations. The only treatment for this complication is passive respiration by the anesthetist until the respirations return. Usually the cessation of voluntary respiration lasts from three to ten minutes. Rarely, it may be thirty to sixty minutes before the patient resumes breathing. In Risk II, III, or IV patients undergoing a major operation, we feel that it is not wise to increase the oxygen-want or hypoxic state of the already physiologically impaired patient. A second clinical disadvantage of an intravenous agent is the difficulty of determining the transition and depth of the anesthesia. The only two definite signs are: movement by the patient, indicating that the anesthesia is too light, and respiratory paralysis, indicating that the anesthesia is too deep.

#### *Regional Methods of Anesthesia*

In regional anesthesia, the four important agents employed are cocaine, Pontocaine, procaine, and Metycaine. The three general methods of administration are topical or surface application, local or incisional infiltration of nerve endings, and nerve block. Nerve blocking is usually designated by its anatomic location—that is, either paravertebral, epidural, or subarachnoid.

#### *Topical application*

In thoracic surgery, the agents of choice for topical anesthesia are a 10 per cent solution of cocaine or a 2 per cent solution of Pontocaine. It is our clinical impression that, in the absence of trauma, fewer complications such as convulsions result from systemic absorption when a 10 per cent solution of cocaine is employed than when a weaker solution is used. The greater vasoconstricting action of the more concentrated solution may be the influencing factor. Where the mucous membranes have been injured, convulsions may occur as the result of more rapid absorption.

We have seen convulsions, or the onset of convulsions, with a 2 per cent Pontocaine topical anesthesia. The immediate treatment for this complication is (1) intravenous Pentothal; (2) intratracheal intubation, so as to establish an open airway, and (3) the administration of oxygen by passive respiration until the drug is detoxified systemically. The usual period required for detoxification

is from fifteen to forty-five minutes, with no residual ill effects on the patient, providing no hypoxia has occurred. The hazards of a cocaine or Pontocaine convulsion lie in the resulting anoxia.

*Methods:* There are various methods for topical application. The classic method is a gradual anesthetization in steps from without inward—that is, the anesthetization of the tongue, pharynx, pyriform sinuses, vocal cords and larynx, and finally the instillation of the solution within the trachea.

Our routine method is the reverse of this method. First, the patient's mouth is sprayed with the anesthetic while he is conscious. Next, the patient is rendered unconscious by a general anesthetic. By means of a special Jackson one hand atomizer\*, and under direct laryngoscopy, the tip of the atomizer is inserted quickly between the cords, and then the whole trachea is bathed with a nebulizing spray of 10 per cent cocaine. Spraying is continued on the withdrawal of the tip through the cords and out of the mouth. A mild attack of spasm may ensue for thirty to sixty seconds. General anesthesia is resumed. Two to four minutes later the larynx is again exposed under direct vision, and an intratracheal tube is inserted without causing spasm or any untoward reflex response.

Our reverse modification has a twofold advantage. (1) The patient does not experience the psychic disturbance or shock that can result from the slower method. (2) The intubation period is greatly shortened. From the time of starting the anesthetic gas, the patient is intubated and ready for surgery within a period of five to ten minutes. This method of intubation is used with most of our patients having a general anesthesia.

A third method of topical anesthesia is transtracheal injection<sup>(5)</sup>. The solution employed for this method is approximately a 0.35 per cent solution of Pontocaine, arrived at by diluting 4 cc. of a 1 per cent solution of Pontocaine to 12 cc. with normal saline. This method is efficient and rapid. It is ideal for patients with overactive gag reflexes, marked oral sepsis, or excessive pulmonary secretion, as in severe bronchiectasis. The patient is conscious, and the topical anesthesia is complete.

With the patient in a supine position, a small subcutaneous anesthetic wheal is raised between the first and second cartilaginous rings of the trachea. Through this wheal, an

\*No. J-1875 c 28 cm canula. (Pilling Phila).



18-gauge needle on a loaded syringe is thrust into the trachea, 6 cc. of the dilute solution in the syringe is injected rapidly, and the needle is then withdrawn. A large gauge needle facilitates the necessary rapid injection against pressure. The patient is placed immediately in a sitting position and told to cough up this solution. This action completely anesthetizes the larynx, vocal cords, and pharynx. Then the patient resumes the supine position, and 4 to 6 cc. of the remaining solution is injected through the same area. With the patient in a sitting position, the solution, by gravitation, now anesthetizes the remainder of the trachea, carina and bronchi. Within five minutes he is ready for bronchoscopy or endotracheal intubation. General anesthesia then can be started if desired. In patients with severe bronchiectasis, this technique permits early aspiration of all secretions, especially those that tend to be liberated during the progression of anesthesia.

#### *Infiltration*

Anesthesia by infiltration is employed for minor procedures only. The agents of choice are procaine and Metycaine, in a 0.5 to 1 per cent solution. Best results with procaine are obtained by taking a 5 cc. ampule of a 20 per cent solution of Novocain and diluting it with saline to the desired concentration. Three to four minims of 1:1000 epinephrine is added to this solution, to counteract the vaso-dilator influence of procaine. Many of the so-called Novocain reactions are the result of an excess of epinephrine in the solution. In dental surgery, excess quantities of epinephrine are employed for a hemostatic effect.

The toxic effects from systemic absorption of a local anesthetic are manifested by a drop in blood pressure, pallor and sweating, and, in the more severe cases, by nausea and vomiting, respiratory depression, or even convulsions. The toxic effects from the absorption of excess epinephrine are (1) a subjective sense of fear; (2) a rise in blood pressure and pulse rate, pallor, a fine fibrillary tremor of the skeletal muscles, and (3) in severe cases, a feeling of intense constriction around the chest. In either condition, the administration of oxygen is of considerable value.

#### *Nerve block*

In nerve block, the agents of choice are procaine and Metycaine. The concentrations of

these solutions range from 0.5 to 2 per cent. Many modifications of nerve block techniques have been recommended for thoracic surgery. We consider paravertebral nerve block as primarily an anesthesia for minor procedures. The majority of thoracoplasties for pulmonary tuberculosis are performed under paravertebral nerve blocks and heavy medication. Other methods for nerve block include the various techniques of subarachnoid or spinal anesthesia.

#### *Intratracheal Intubation*

##### *Purposes*

As previously stated, all major thoracic operations done are under general anesthesia. Intratracheal intubation is mandatory in these major procedures and advisable in some minor procedures, especially in the poor risk patients.

Intubation has two important purposes. It insures and maintains an open air-passage into the lung, by means of which the various methods of controlled or balanced anesthesia are facilitated. By balanced anesthesia we mean supported, augmented, or positive pressure breathing, synchronized to the patient's respiratory cycle. This synchronization can be accomplished either by simple manual pressure or by complicated machines\* for passive breathing. We are reluctant to depend upon a mechanical breathing machine. Conditions vary rapidly, and the constant attention of the competent anesthetist is far superior in coping with these ever-changing conditions than any machine.

Intubation also provides a free passage from which all accumulating respiratory tract secretions may be readily aspirated, thus facilitating both the oxygenation and anesthetization of the patient. The drier the patient and the clearer the airway, the better the exchange of gases across the alveolar membrane.

##### *Technique*

The techniques and the apparatus used in intratracheal intubation vary with the contemplated procedure and the preference of the anesthetist. We prefer the establishment of a closed, air-tight circuit between the lungs and our anesthesia machine. In adults, we routinely use the circuit method of the carbon dioxide absorption gas machine. In children below the age of 10, Waters' to-and-fro carbon dioxide absorption rebreathing equipment is used. We feel that the increased

\*Mautz or Crafoord.

breathing effort necessitated by the circuit resistance is hazardous in children. In infants and very young children, the to-and-fro method is not advisable because of increased resistance. A modification of the Ayre T-tube technique is employed with infants. With this technique, the patient breathes into and out of a continuous one-way stream of an anesthetic mixture, usually ether in an abundant oxygen atmosphere.

As previously stated, adequate ventilation and oxygenation of the patient is the key-stone of good thoracic anesthesia. One of the important factors in this oxygenation of the patient is the efficiency of the intratracheal tube. The caliber and patency of such tubes markedly influence their efficiency. The internal diameter of the intratracheal tube is very important. The average rubber transoral tube is thick-walled, to prevent compression or kinking.

Our choice of intratracheal tube is the flexible metal Woodbridge tube, a modification of the original Flagg tube. It is constructed of a fine gauge, closely coiled piano wire, with a small solid tip and a machined butt end; it cannot constrict or kink. These tubes are made air-tight by a replaceable rubber covering of Penrose tubing. This flexible Woodbridge modification has two important advantages over the more rigid transoral rubber type. (1) The larger inside diameter insures an excellent air passage, as well as easy access for adequate aspiration of secretions in any thoracic procedure. In patients with excessive pulmonary secretions, this factor may be more important to the safety of the patient than is the anesthesia. (2) The flexibility minimizes the dangers of mucosal damage from pressure points within the trachea. At certain points within the respiratory tract, the more rigid Magill or Portex types tend to ride with respiratory excursions, the butt end of all tubes being stationary at the mouth.

After the intubation, the desired air-tight circuit is obtained either by a snug fitting face mask, or by the use of an intratracheal Waters-Guedel inflatable balloon cuff attached to the intratracheal tube. We routinely employ the inflatable balloon cuff to insure a closed circuit effect. The major advantage in the balloon method is that any positive pressure applied within the system is exerted within the respiratory tract, rather than being dissipated or equally exerted in the esophagus and stomach. We have seen distension of

the stomach resulting from applied pressure where a face mask had been employed. Occasionally, the clinical picture of shock results from overdilation of the stomach.

In esophageal surgery the balloon cuff method is mandatory. (1) It maintains a closed air-tight circuit. (2) It tends to prevent surgical complications that arise from gas and secretions being forced under pressure into or through the anastomotic site of operation. (3) Some type of Wangenstein suction can be maintained continuously, without loss of the air-tight respiratory circuit. (4) An air-tight balloon prevents the spilling over of excess pharyngeal or gastric secretions into the lungs.

The two reported hazards from balloon cuff insufflation are rupture of the balloon, with the possible entrance of a foreign body, and ischemic ulceration of the tracheal mucosa from overinflation and resultant pressure. In our opinion, neither danger can be realized if the inflation is carried out in the proper manner. While the balloon is being gradually inflated by means of a syringe in one hand, pressure on the breathing bag is exerted with the other hand until the circuit is air-tight. The balloon is gradually deflated until, upon pressure on the bag, there is a slow leak in the system. Then 1 cc. more of air is injected and the pilot tube to the balloon is clamped tight. In very long operations, the cuff is momentarily deflated at regular intervals. After re-inflation of the cuff, the intratracheal tube is again aspirated in order to remove any secretions that may have entered the lung area during the period of deflation.

#### *Position of the Patient*

A third factor in the maintenance of optimal anesthesia and adequate oxygenation is the position of the patient during the operation. The three standard positions are supine, lateral and prone. Physiologically, the supine position is best for the patient and most satisfactory for the anesthetist. In this position, there is no splinting of intercostal or diaphragmatic respiratory exchange. Most cardiac operations are performed in this position.

The classic position for most thoracic operations is the lateral position. Physiologically, this position contributes to respiratory embarrassment. Naturally, there is loss of intrapleural dynamics when the upper thorax is entered. When the patient is in this position,



the dependent and functioning thoracic viscera are splinted by the weight of the body and the operative manipulations of the surgeon or assistants. The physiologic functions of the dependent side may be further impaired by the use of exaggerated lift or table break to improve operating conditions. In patients with relatively normal vital capacity, usually tumor patients, this splinting may not be a serious factor. In very poor risk patients with abscesses, bronchiectasis or tuberculosis, the position may be the cause of severe hypoxia resulting from the flooding of the dependent lung and the surgical collapse of the manipulated lung. The danger of contralateral spread of infection is a very serious hazard in contemplated surgical removal of the lung for tuberculosis.

The prone position, physiologically, is the best position when a special table or equipment is used. With the Overholt table<sup>(6)</sup> or the Naclario modification, there is very little impairment of intercostal activity, and no impairment of the diaphragmatic excursions. The patient can be so placed that the diseased lung is lower than the healthy side, and the head is lower than the thorax. Thus, with drainage by gravitation, plus aspiration of the excess secretions, we can minimize the dangers of a contralateral spread of infection. In very poor risk patients, this position results in the minimal disturbance of respiratory exchange.

The major disadvantage of the prone position is that the relaxed anesthetized patient becomes "swayback." In the patient of advanced years this may cause vertebral subluxation or chronic back pain. From the viewpoint of the anesthesiologist, the major advantage of improved physiology far outweighs the minor technical difficulties of ready access for frequent aspiration of the patient. For the surgeon, operative conditions are ideal. The thoracic viscera fall away from their posterior mediastinal attachments, and thus are more readily visualized. Also, the position is less wearing to the surgeon as he remains in a sitting position through most of the operation. To the second assistant, across the table, it is a position of torture. He can hardly straighten his back at the end of the operation.

#### *Operative Complications*

A discussion of operative complications and their management that may arise in thoracic surgery and anesthesia is a paper in

itself. A few complications such as arrhythmia, convulsions, excess secretions, vasoreflex and hypoxic state have already been discussed.

Blood loss is a common complication, and can be treated only by blood replacement and not by the use of pressor stimulants. Transfusions should be begun with the start of operation. We feel that the supportive positive or even passive positive methods of controlled breathing should be resorted to by the anesthetist in order to minimize or abolish the dangers of hypoxia. In all transthoracic operations—especially esophageal procedures, where both pleura are entered—passive or controlled respiration is mandatory.

Another disturbing complication is a severe fall in the blood pressure as the result of traction reflexes noted in high esophageal surgery, where considerable manipulation and traction is exerted around the arch of the aorta. On encountering or anticipating such reflexes, we employ a continuous slow infusion of a pressor drug to minimize the reflex response. Our practice is to add and mix thoroughly 0.5 cc. of Neo-syneprine, a 1 per cent solution to each 500 cc. of blood used in transfusing the patient during this period of traction.

Cardiac arrest briefly requires three important integrated procedures. (1) active cardiac massage; (2) administration of an excess of oxygen by rhythmic, passive respiration; (3) cardiac muscle stimulation. This stimulation may be achieved, either by Beck's electric shock method<sup>(7)</sup>, or by the introduction of pressor drugs into the heart muscle to initiate activity. Occasionally, the simple needle puncture stimulation is adequate to restore cardiac activity.

Nicholson recommends the Procaine-epinephrine combination—that is 9.5 cc. of a 1 per cent solution of procaine, plus 0.5 cc. of 1:1000 epinephrine<sup>(8)</sup>. Procaine reduces the state of cardiac muscle irritability; epinephrine or pressor drug is a cardiac stimulant. Lately, for our pressor drug we employ Neo-syneprine in a 1 per cent solution. Approximately 1 to 2 minims are diluted to 5 cc. with ventricular blood, and re-injected into the chamber of the heart. We feel that better cardiac action is obtained with Neo-syneprine than with epinephrine. Epinephrine may result in fibrillation. Neo-syneprine results in a slow, forceful heart beat thus facilitating venous return and refilling of the right auricle and ventricle.

### *Postoperative Responsibilities*

The immediate postoperative responsibility of the anesthesiologist is shared with the surgeon. Experience has taught us that the critical period for complications is usually not during the main period of surgery but in the period of closing the chest wall and moving the patient from table to bed. There are two possible reasons for the occurrence of complications at this point. The first is that at this time,\* when the tension and attention are less marked, the surgical team tends to relax. Therefore, the anesthetist should be especially attentive. The second reason is that the physiologic state of the patient is continuing downhill although the operation is about over. There may be an acceleration in this lowering of the patient's physical reserves.

A serious complication that may arise during the closure of the chest wall is sudden, severe circulatory collapse, as evidenced by a marked fall in blood pressure and pulse changes. This complication results from marked positive intrapleural pressure over a prolonged period, interfering with right-sided venous return of blood to the heart. This pressure may be caused by the anesthetist's overeagerness to re-expand the lung. Again, this causative factor may be a ball-valve sucking action during the closure of a chest wall following pneumonectomy, with a resultant shift in pressure within the thorax. Release of pressure will immediately improve the circulation.

At the end of the operation, changes in the patient's position should be kept to a minimum. Move the patient directly from the operating table to his bed. Sudden respiratory cessation, even cardiac arrest, may result from too abrupt a change, especially the quick moving of the patient from a prone to a supine position. The intratracheal tube should not be removed until the patient is in bed with an adequate respiratory exchange. Occasionally, emergency passive respiration may be necessary. Tracheal aspiration should be employed while the intratracheal tube is being removed.

Bronchoscopy is not advisable until the patient's condition is improved, usually twenty-four hours after the operation. Oxygen should be started as soon as the patient is in the recovery room or back in his room. We prefer nasal oxygen because of the technical difficulties in maintaining the necessary

nursing care and keeping an efficient oxygen concentration within a tent. Immediate chest suction should be started, usually with a suction pressure of from 6 to 8 cc. of water. This suction not only re-expands the partly collapsed lung but also improves the drainage of accumulated sero-sanguinous fluids within the pleural cavity. Our patients are turned at one to two hour intervals from their back to the operated side, and back again. As previously mentioned, our intravenous fluids are either blood or 5 per cent dextrose in water.

Care is taken not to depress the patient unduly with postoperative medication. The prolonged withholding of opiates can also be deleterious. The early use of opiates during recovery from anesthesia lessens sensory pain stimuli. These pain stimuli may result in falls in blood pressure, or at least in a very restless and agitated patient. Particularly, we caution against the use of opiates for restlessness due to hypoxia. The hypoxic patient is best treated by lung re-expansion and adequate oxygen. When so treated, the restlessness will subside.

These are but a few of the immediate postoperative responsibilities of the anesthesiologist. In view of the fact that the anesthesiologist is routinely present in the hospital, he is in a better position to check and cope with the fluctuating physiologic postoperative status of the patient than is a visiting surgeon.

### *Summary*

Anesthesia in thoracic surgery as practiced today is the intricate working of a team, composed of the anesthesiologist, the internist, and the surgeon. The preparation of the patient both physiologically and psychologically is the responsibility of all. The anesthesiologist now practices more than the mere administration of an anesthetic agent. He has the major responsibility for the management of the physiologic problems that arise during operation and immediately afterward. Specific problems and complications have been mentioned. The supportive or protective therapy has been discussed. Two important criteria for the safety of the patient and the success of the operation are adequate oxygenation and optimal anesthesia. The fulfilling of these criteria has been presented in detail.

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## THE ROLE OF THE PROFESSIONAL ANESTHETIST IN A CASE OF CARDIAC TAMPONADE

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Though there have been physician-anesthetists since the time of John Snow, who, in 1847, was the first doctor of medicine to devote his entire attention to the administration, investigation, and teaching of the art and science of anesthesia, the modern development of anesthesiology as a medical specialty can be dated from 1937. In that year, the American Board of Anesthesiology, with the approval of the Advisory Board of Medical Specialties of the American Medical Association, was founded, first as a subsidiary of the American Board of Surgery. Later, in 1941, it became an independent board.

The classic need for specialized anesthesia is in chest surgery. While certain emergency operations in the chest are possible without intrapulmonary positive pressure, all elective and most emergency chest surgery is made a great deal simpler and less hazardous by the competent administration of an anesthetic of choice through an endotracheal tube. The prevention of mediastinal shift, the provision of adequate oxygen exchange, and the postoperative re-expansion of a collapsed lung are in every sense essential to modern thoracic surgery. The importance of close teamwork between the professional anesthetist and the surgeon is illustrated by the following case.

### *Case Report*

A 26 year old Negro man was admitted to St. Agnes Hospital twenty minutes after having been stabbed with a knife in the left portion of the chest. On admission he was conscious and restless, dyspneic, and grunting. His neck veins were full, and his blood

pressure was found to be 60 systolic, and 0 diastolic, with a low volume, rapid pulse. The wound was in the fifth interspace, just inside the nipple line, and was bleeding slightly. On percussion the border of the heart was found outside the nipple line, and the heart sounds were muffled.

The house officer was momentarily unable to get in touch with the surgeon on call. He called the community's one professional anesthetist, who promptly obtained his kit and transported it *and* the surgeon to the hospital. Blood had been obtained from the local bank and was on hand in the operating room.

The patient was immediately anesthetized with Sodium Pentothal and d-tubocurarine intravenously, and an intratracheal tube was inserted at the very moment the incision was made. The chest was opened through a classic intercostochondral incision, with division of the fourth, fifth and sixth cartilages, and ligation of the left internal mammary vessels. The bulging pericardium was opened at the stab wound, upward and downward, the feebly beating heart was delivered, and the spurting opening in the apex was closed with interrupted chromic sutures.

Almost immediately forceful, bounding cardiac activity began, but this activity soon stopped except for a hypodynamic, disordered impulse. A combination of cardiac massage by the surgeon and, on the advice of the anesthetist, the injection of 10 cc. of 1:10,000 epinephrine into the right atrium brought about forceful and effective regular cardiac impulses. The pericardium was not resutured, since it was clearly constrictive. Had this not been the case, the anterior pericardium would have been closed and a drainage slit made posteriorly. The chest was securely closed, and an intercostal catheter left in the lower part of the chest in the posterior axillary line, and attached to a water trap. The patient was given a transfusion, his intercostal nerves were blocked, and antibiotics were prescribed. Electrocardiograms taken on the second, eighth, and twelfth days showed no changes beyond those attributable to pericardial inflammation.

The patient's temperature was sharply elevated on the first postoperative day, but on the third day dropped to normal and remained. He was allowed out of bed on the twelfth day, discharged on the sixteenth day, and has been symptom-free since discharge.

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### Comment

I believe we have fairly conclusive evidence in this case that for at least five minutes the heart was unable to propel the blood. The fact that this patient reacted promptly from the anesthesia would seem to indicate that cardiac massage during this period was effective. Otherwise one would expect, at best, a slow recovery from prolonged cerebral anemia. Cerebral anemia in this case was only momentary, and I was never able to detect any conclusive sign of cerebral damage. I believe it is fair to attribute the fever to other factors, perhaps absorption of blood.

### Conclusion

Emergency surgery of this type plays a small part in the day-by-day life of both surgeon and anesthetist. Nevertheless, in the anesthetist's absence, this patient, in all probability would have died. I believe that the gratitude this one patient owes to the presence of an anesthetist in our town is a token of what the whole community should feel.

## CONGENITAL TRACHEO-ESOPHAGEAL FISTULA

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and

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DURHAM

Congenital tracheo-esophageal fistula is a common anomaly which is incompatible with life unless it is promptly recognized and treated. According to Sir G. Gray Turner, this condition is as common as cleft lip<sup>(1)</sup>.

In rare instances, atresia of the esophagus may be present without an associated tracheo-esophageal fistula. Vogt's classification of congenital atresia of the esophagus<sup>(2)</sup>, which is the one most widely accepted, is as follows:

- I. Esophagus absent
- II. Atresia of a portion of the esophagus
- III. Atresia of a portion of the esophagus with an associated tracheo-esophageal fistula.

Read before the Section on Surgery, Medical Society of the State of North Carolina, Pinehurst, May 9, 1951.

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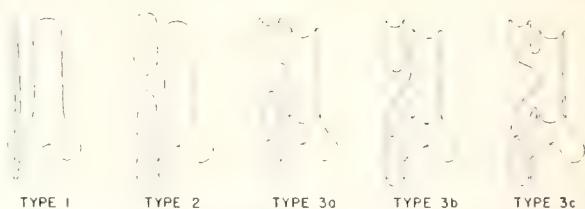


Fig. 1. Vogt's classification of congenital esophageal atresia.

- (a) Fistula between the upper esophageal segment and the trachea.
- (b) Fistula between the lower esophageal segment and the trachea.
- (c) Fistula between both esophageal segments and the trachea.

The majority of the cases fall in group III (b).

### Embryology

The separation of the respiratory tract from the foregut begins at about the fifteenth day of fetal life, when the embryo is 3.2 mm. in length. At this time a longitudinal groove appears on the ventral surface of the foregut. A constriction, starting caudally and progressing cranially, progressively separates this ventral groove or respiratory tract from the foregut, which becomes the esophagus. It is a defect in this mechanism of separation which leads to a tracheo-esophageal fistula.

Immediately after the separation of the trachea and esophagus, epithelial proliferation converts the lumen of the esophagus into a solid epithelial core, which becomes vacuolated; with the coalescence of the vacuoles, a new lumen is formed. It is a defect in this mechanism of vacuolation which leads to esophageal atresia.

Tracheo-esophageal fistula is often associated with other anomalies. For this reason tracheo-esophageal fistula should be looked for when other anomalies are present in a newborn infant. Conversely, the presence of tracheo-esophageal fistula should arouse the suspicion that other anomalies may be present. Of the 10 cases to be reported in this paper, 2 were associated with imperforate anus and 2 with cardiac anomalies. In one patient with a tracheo-esophageal fistula and the tetralogy of Fallot the extrahepatic bile passages were absent.

### Diagnosis

The clinical picture of tracheo-esophageal atresia is typical and easily recognized. It is



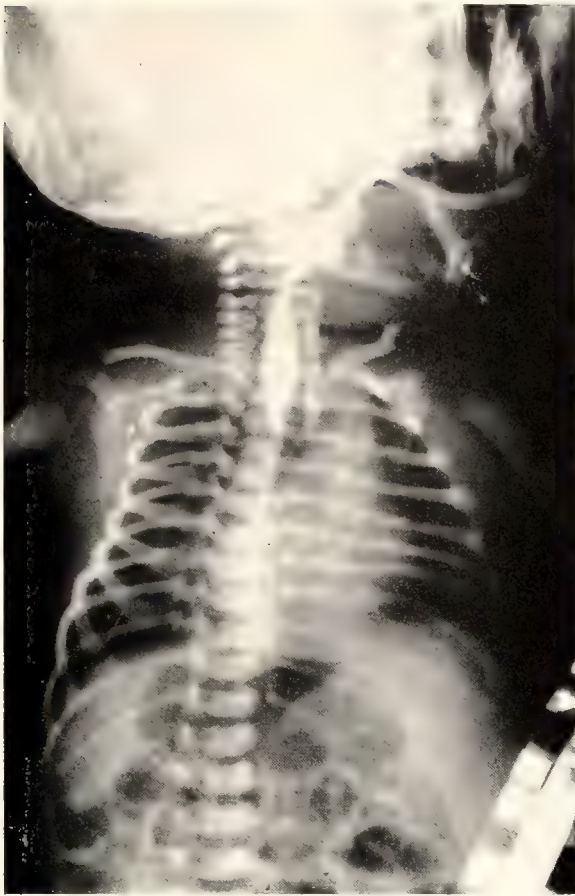


Fig. 2. Roentgenogram showing the common type III (b) anomaly. Note iodized oil in proximal blind esophageal segment and gas in the intestinal tract.

characterized by excessive mucus in the mouth, and by regurgitation and strangling when the first feeding is attempted. Inability to pass a small, soft rubber catheter beyond the first part of the esophagus confirms the diagnosis.

If facilities for roentgen and fluoroscopic examination are available, the blind upper esophageal segment can be visualized by injecting a small amount of iodized oil through the catheter. Following the examination the lipiodol is aspirated with the catheter. Barium or bismuth mixtures should never be used for this purpose because of the ill effects when the material is aspirated into the lungs. Along with the fluoroscopic examination, roentgenograms should be made of the chest and abdomen. The presence of gas in the intestinal tract, associated with esophageal atresia, is evidence of a tracheo-esophageal fistula. If no gas is present in the intestinal tract after twenty-four hours of life, it is unlikely that a fistula is present; in such

cases the distal esophageal segment is usually atretic or cordlike.

### *Operative Techniques*

The treatment of the common type of anomaly (class III (b)) must accomplish three things. (1) It must close the tracheo-esophageal fistula in order to prevent regurgitation of the stomach contents into the air passages. (2) It must drain the proximal blind esophageal pouch to prevent aspiration of mucus into the trachea. Either of these abnormalities, if untreated, will cause pneumonia and death. (3) The third aim is to establish continuity of the upper gastrointestinal tract, so that food may be taken through the mouth.

Gastrostomy alone—formerly the common treatment for this anomaly—invariably leads to death from aspiration of stomach contents through the tracheo-esophageal fistula. Jejunostomy has the same fatal results. In 1913 Richter<sup>(3)</sup> performed an intrathoracic ligation of a tracheo-esophageal fistula and did a gastrostomy, but this patient died. In the years that followed it was felt that such a direct attack on the intrathoracic fistula could not be tolerated by infants, and many indirect methods of approach were tried. Leven<sup>(4)</sup> elevated the esophagus out of the abdominal wound as a loop to prevent reflux of the stomach contents into the trachea. Gamble<sup>(5)</sup> divided the cardia of the stomach, bringing the proximal end out on the abdomen as a mucous fistula, and the distal end out as a gastrostomy. Gage and Ochsner<sup>(6)</sup> ligated the abdominal esophagus with tape. Carter<sup>(7)</sup> pulled the esophagus down into the abdomen, ligated it as high as possible, and divided it. These indirect attacks all met with failure.

In November, 1939, Leven<sup>(8)</sup> operated on a patient with congenital tracheo-esophageal fistula, ligating the fistula in the chest, performing a gastrostomy, and creating a cervical esophagostomy. The patient was the first to survive the operation, and was 1 year old at the time of Leven's report.

When Richter<sup>(3)</sup>, in 1913, described his direct approach to a tracheo-esophageal fistula, he stated that he felt an end-to-end anastomosis of the esophageal segments to be preferable to any multiple stage procedures. In 1939, Shaw<sup>(9)</sup> published the first report of a case treated by ligation of the fistula and end-to-end anastomosis. His patient died on

the twelfth postoperative day, apparently as the result of transfusion reaction. Lanman<sup>(10)</sup>, in 1940, published a report on a group of cases treated by direct anastomosis in 1936-1937 at the Children' Hospital in Boston. These were probably the first cases handled in this manner, and none had a successful outcome.

The first case successfully treated by ligation of the fistula and end-to-end anastomosis is that performed in March, 1941, and reported by Haight and Towsley<sup>(11)</sup> in 1943. Since then Haight<sup>(12)</sup> has reported the results in 52 cases, in 40 of which anastomosis was done. Only 18 patients in this group survived, but all of the last 6 operated on had lived. Ladd and Swenson<sup>(1)</sup> reported operations performed on 76 patients up to July, 1946, with 14 patients living and 18 dead after primary anastomosis, and 16 living and 27 dead after multiple stage procedures. Swenson<sup>(13)</sup> was able to report an outstanding personal series covering an 18 month period. During this time he operated on 20 patients, performing a primary end-to-end anastomosis in 14, with only one failure. Smaller series have been reported by Longmire<sup>(14)</sup>, Lam<sup>(15)</sup>, Bigger<sup>(16)</sup>, Humphreys<sup>(17)</sup>, and others<sup>(18)</sup>.

### *Treatment*

#### *Preoperative care*

The preoperative care of these patients should begin when the diagnosis is made, and should be directed toward proper hydration and the prevention of aspiration pneumonia. It is essential to keep patients in the head down position and to aspirate the pharynx at frequent intervals. They should be turned from side to back to side every ten to fifteen minutes, so that no one portion of the lungs is dependent for any length of time. When the preliminary roentgen examination of the chest shows the presence of pneumonia, every effort should be made to clear up this condition before operation. The baby should spend more time with the pneumonic side up than with it down; by thus increasing the respiratory excursion and promoting drainage of the affected lung, it is possible in many instances to clear up the pneumonia. Since the operation to be described is carried out in the right side, it is particularly important to have the left side free of pneumonia.

While hydration is important, it is felt that complete or excessive hydration results in the

formation of more mucus, and that pulmonary consolidation is more likely to develop under these circumstances than when dehydration is present. For that reason these infants are given only one half of their calculated fluid requirement. This limitation of fluid intake is practiced in both the pre- and the post-operative management of these cases.

#### *Operation*

If the examination shows the absence of gas in the intestinal tract at the end of twenty-four hours, one should assume that a tracheo-esophageal fistula does not exist, and that the distal esophageal segment is either short or absent. The infant may be examined by a bronchoscope in an attempt to decide whether or not a fistula exists. When the distal esophageal segment is short or absent, the ideal operation of end-to-end anastomosis is impossible, and two other operative procedures must be considered. The first is to bring the proximal segment out through the neck to drain the pharynx, and then to perform a gastrostomy through which the infant can be fed. At a later date some type of thoracic esophagus must be constructed to connect the stomach with the esophageal fistula in the neck. The second operative procedure to be considered when the distal esophageal segment is believed to be short or absent is a left thoracotomy, with mobilization of the stomach and the creation of an esophago-gastrostomy in the left side of the chest.

The roentgen finding of gas in the intestinal tract indicates the presence of the common type of anomaly (III (b)), in which a primary anastomosis of the esophagus is possible. The operation is performed through a right posterior extrapleural approach to the mediastinum, with resection of portions of the third, fourth, fifth and sixth ribs. The fistula between the trachea and the distal esophagus is ligated and divided, and an end-to-end anastomosis is made between the two ends of the esophagus. The operation takes from two to three hours, and is done under general endotracheal anesthesia. The technical details of this operation and useful modifications have been described by Haight and Towsley<sup>(11)</sup>, Haight<sup>(18)</sup>, Ladd<sup>(19)</sup>, Ladd and Swenson<sup>(1)</sup>, and Swenson<sup>(13)</sup>. The operation done at Duke Hospital is a two layer anastomosis with silk, including a mucosal suture, such as that used by Swenson.



### *Postoperative care*

The temperature is taken rectally as soon as the baby reaches the ward, to determine whether he has lost or gained heat. Measures are taken to correct any abnormality of temperature, and the baby is placed in an oxygen box. The care of these infants requires a special nurse, for the baby must be turned from side to back to side every ten to fifteen minutes, so that no one part of the lungs remains dependent for very long. Frequent aspirations of the pharynx are necessary to prevent aspiration of mucus. A tube is not placed in the stomach through the anastomosis, since this causes excessive secretion in the pharynx, prevents secretions from being swallowed, and causes undue pressure on the suture line. Fluids, which are given by vein or hypodermoclysis, are restricted to about half the calculated requirement, the daily total being 40 cc. per kilogram of body weight.

After forty-eight hours a gastrostomy is done under local anesthesia, and feedings through this opening are begun the following day. On the eighth day lipiodol is given by mouth. If roentgen examination shows the anastomosis to be patent and intact, oral feedings are begun slowly. After oral feedings have been established, a thread is passed down the esophagus and out through the gastrostomy, and is worn as a continuous loop. The purpose of this procedure is to allow retrograde dilatations with the Tucker bougies to be carried out if necessary. When dilatations are no longer necessary, the string may be withdrawn and the gastrostomy allowed to close.

### *Report of Ten Cases\**

Since January, 1947, when the Division of Thoracic Surgery was organized at Duke Hospital, 10 cases of congenital tracheo-esophageal fistula have been seen; all fell in Vogt's class III (b). One family refused operation for the child. In the other 9 cases a right posterior mediastinotomy was performed, with ligation of the fistula and attempted end-to-end anastomosis. The first 3 operations were unsuccessful, but 4 of the last patients operated on have done well. Summaries of the case histories follow.

\*Since this article was submitted for publication, 4 additional patients have been operated upon. In each case, the pleural cavity was entered by the fourth right rib bed. Three of the 4 patients survived, and are doing well. None of the survivors required a gastrostomy. One patient died from aspiration pneumonia due to a recurrence of the fistula.

### *Case 1*

A 3 day old infant, born April 5, 1948, had a posterior mediastinotomy with ligation and division of the fistula and an end-to-end anastomosis. She died on returning to the ward. Autopsy disclosed other anomalies—namely, the tetralogy of Fallot and absence of the extrahepatic bile passages.

### *Case 2*

An infant born on April 15, 1948, had an imperforate anus in addition to a tracheo-esophageal fistula. Operation was refused by the parents.

### *Case 3*

An infant born on June 27, 1948, had a posterior mediastinotomy, with ligation and division of the fistula and an end-to-end anastomosis, at the age of 4 days. When a leak developed in the suture line on the ninth postoperative day, a gastrostomy was performed. The patient died on the fifth day following gastrostomy. Autopsy showed that the tip of the gastrostomy tube had eroded through the stomach and left side of the diaphragm. The esophageal suture line had separated.

### *Case 4*

In a 2 day old infant, born July 14, 1948, a posterior mediastinotomy, with ligation and division of the fistula and end-to-end anastomosis, was performed on the second day after birth. A gastrostomy was done at the same time. The baby died during the latter part of this long procedure.

### *Case 5*

On October 16, 1948, a posterior mediastinotomy with ligation and division of the fistula was performed on a 4 day old infant. A telescopic anastomosis, such as that described by Haight, was carried out, and forty-eight hours later a gastrostomy was performed. The gastrostomy tube was removed on the eleventh day, since the infant was then taking all feedings by mouth. She has had no difficulty in swallowing to the present time.

### *Case 6*

A 12 hour old infant, born May 4, 1949, had a posterior mediastinotomy, with ligation and division of the fistula and an end-to-end anastomosis. She died thirty-six hours later. Autopsy showed an interventricular septal defect and massive pulmonary hemorrhage, the cause of which was obscure. The anastomosis was intact.

### *Case 7*

At the age of 3 days, this male infant, born May 31, 1949, had a right thoracotomy, with ligation and division of the fistula and end-to-end anastomosis. A gastrostomy was done the next day. A leak developed in the esophageal suture line, but drained uneventfully and soon healed. As healing took place a stricture developed, which necessitated a second operation and re-establishment of the anastomosis when the child was 2 months of age. The child now undergoes occasional retrograde dilatations, but takes all feedings by mouth and is developing normally. The gastrostomy was closed at the age of 18 months.

### *Case 8*

A 4 day old infant, born August 20, 1949, had a posterior mediastinotomy, with ligation and division of the fistula and end-to-end anastomosis. The baby did well for four weeks after operation and took regular feedings by mouth. It died of pneumonia in the fifth week, and autopsy showed re-establishment of the tracheo-esophageal fistula from the site of

the original fistula in the trachea to a point in the esophagus several millimeters below the anastomosis.

### Case 9

On October 12, 1949, a posterior mediastinotomy, with ligation and division of the fistula, was performed on a 4 day old infant. The esophageal defect which had to be bridged was more than 3 cm. in length, and the anastomosis was therefore under some tension. A gastrostomy was done forty-eight hours later. The baby swallowed well for about two weeks, when a stricture rather suddenly developed at the anastomotic site and could not be dilated. When the child was 6 weeks of age, the stricture was resected, and the anastomosis re-established. The patient has required periodic retrograde dilatations, but is now taking all feedings by mouth, and is gaining weight. The gastrostomy was closed at the age of 18 months.

### Case 10

An operation for imperforate anus was performed on an infant born on November 21, 1949. During his postoperative course, he had an excessive amount of mucus and did not start to feed. On the sixth day of life, he was found to have esophageal atresia with a tracheo-esophageal fistula. A posterior mediastinotomy, with ligation and division of the fistula and end-to-end anastomosis, was performed. Forty-eight hours later, a gastrostomy was done. Oral feedings were established, a string was passed down to the stomach to form a continuous loop, so that retrograde dilatations could be done when necessary. He is taking all feedings by mouth now, and is gaining weight.

### Conclusion

The improvement noted recently in the results of treatment for congenital tracheo-esophageal fistula can probably be attributed to early recognition of the anomaly, improvement in infant anesthesia, and better post-operative care. The operative procedure, although calling for speed, gentleness, and fine suture technique, is not difficult. When the condition is diagnosed promptly and the baby is immediately referred for surgery, the chances of a successful outcome are better than even.

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## HEMORRHAGE FROM PEPTIC ULCERATION IN MECKEL'S DIVERTICULUM

### *Report of Case Occurring In an Adult*

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Although gastrointestinal hemorrhage in Meckel's diverticulum is common in infants and children, it is rare in adults. Denecke<sup>(1)</sup> first discovered ulceration in Meckel's diverticulum in 1902. Deetz<sup>(2)</sup>, in 1907, described the presence of gastric mucosa in these structures. He emphasized the fact that these lesions are similar to the common duodenal and gastric ulcers. In a review of 1,605 cases, hemorrhage was found to be the most common complication, occurring 496 times, an incidence of 30.9 per cent<sup>(3)</sup>.

It has been estimated that heterotopic tissue is present in 25 per cent of these anomalies. Johnston and Renner<sup>(4)</sup>, in reviewing 78 cases, found heterotopic tissue in 64, of which 50 presented evidence of ulceration. Ladd and Ross<sup>(5)</sup>, report gastric mucosa in 40 cases of a 73 case series. In this series, hemorrhage was the most common complication, occurring twenty-six times. Mecray, Ristine, and Gunter<sup>(6)</sup>, found that ulcer in Meckel's diverticulum was the most frequent pathologic condition.

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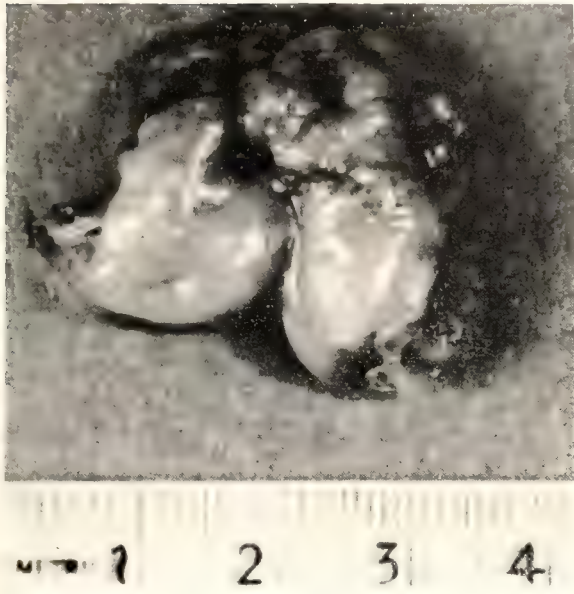


Fig. 1. Meckel's diverticulum, showing the ulcer in the tip of the diverticulum.

Cobb<sup>(7)</sup>, in reviewing 100 cases of ulcerations in Meckel's diverticulum, reported 17 cases in patients 18 years of age or older. Apparently, ulceration develops as the intestinal mucosa is eroded by the secretions of the heterotopic gastric cells. The ulcer usually is found at the base of the diverticulum. A review of the literature reveals that the anomaly of Meckel's diverticulum occurs more frequently in the male.

#### *Symptoms*

The alarming feature of this pathologic entity is usually intestinal hemorrhage—most often silent, although cases in which

pain occurred either prior to or during the bleeding have been reported. When pain is present, it is usually para-umbilical, and may be accompanied by nausea and vomiting. Rectal bleeding is characterized by a stool of dark, clotted material, usually followed by bright red blood. In general, the bleeding is not as tarry as hemorrhage from the upper gastrointestinal tract occurring in cases of gastric or duodenal ulcer. Hemorrhage from a bleeding Meckel's diverticulum is often massive, the blood count dropping to 2,000,000 red blood cells, or less.

#### *Diagnosis and Treatment*

In the investigation of this type of bleeding in adults, careful history-taking and physical examination, roentgen studies of the upper gastrointestinal tract and ileum, barium enema examination of the colon, and proctosigmoidoscopy are essential. If these studies are noncontributory to the diagnosis—as is nearly always the case in bleeding ulcers of Meckel's diverticulum—exploration is indicated. Before exploration is carried out, bleeding esophageal varices, bleeding ulcerations of the stomach and duodenum, benign and malignant tumors of the small bowel, polyps and malignant growths of the large bowel must be ruled out. It should be emphasized that bleeding from a rectal or colonic polyp is frequently confused with a bleeding Meckel's diverticulum, although in the former the bleeding is not apt to be massive, and the color is uniformly bright red.

The following case report illustrates the massive tendency of the bleeding, which can

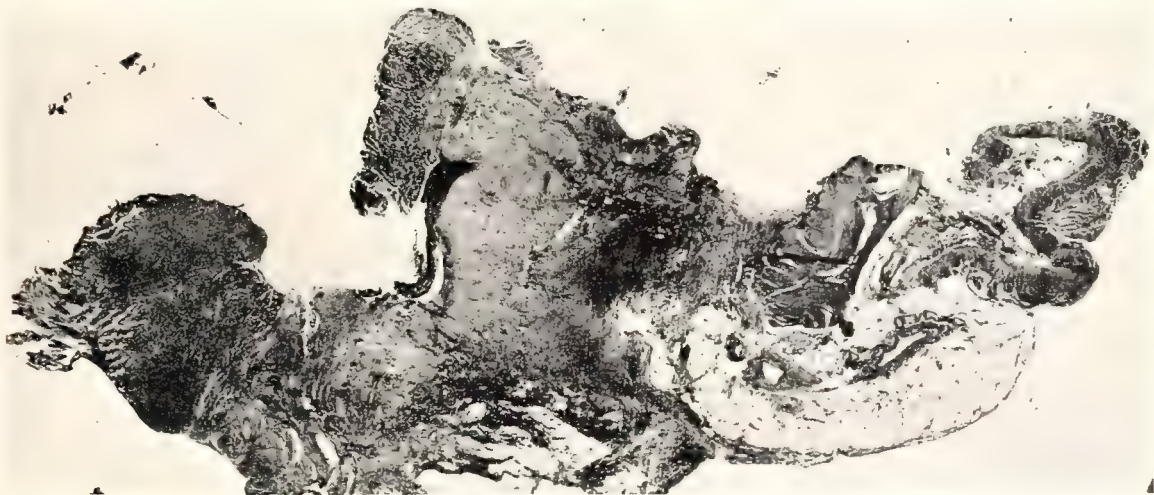


Fig. 2. Low power photomicrograph of specimen. Note the ulcer, with gastric mucosa and the ileal mucosa on the right.

occur from ulcerations in these congenital abnormalities. Treatment includes adequate blood replacement, abdominal exploration, and resection of the diverticulum. At times it may be necessary to resect a segment of the ileum with the diverticulum, to prevent encroachment upon the lumen of the ileum.

### *Report of a Case*

A 43 year old white male was admitted to Watts Hospital with the chief complaint of intermittent painless rectal bleeding for the past two years. The patient stated that at thirty to sixty day intervals he had had episodes of rectal bleeding, lasting approximately twenty-four hours. The blood at first was dark, and contained some clots; then it became bright red. The bleeding was not accompanied by pain, nausea, or vomiting. On one occasion before admission he became weak and pale from loss of blood. He had lost about 10 pounds in the last two years. His past history was essentially negative, except for an appendectomy performed in 1935.

The physical examination revealed a well developed, rather thin asthenic male, who did not appear to be in any acute distress. The physical examination was completely negative except for a left indirect inguinal hernia. A well healed right rectus scar was noted.

On admission this patient was quite anemic, with a red blood count of 2,900,000, a hemoglobin of 7.5 Gm. (52 per cent). During the process of preparation for surgery, he received 1500 cc. of blood. Diagnostic procedures consisted of a proctosigmoidoscopic examination, barium enema, two contrast barium enemas, small bowel studies, and an upper gastrointestinal series, which were all negative.

An exploratory laparotomy was performed on March 29, 1950. Most observers thought this patient had a polyp of the colon, although Meckel's diverticulum had been mentioned. A thorough exploration of the large bowel was negative. Exploration of the small bowel disclosed a Meckel's diverticulum about 15 cm. from the cecum in the terminal ileum. An ulcer was noted at the tip, showing marked serosal inflammation. The diverticulum was resected.

The postoperative course of this patient was uneventful, and he was discharged from the hospital on April 4, 1950.

The pathologic examination revealed a definite ulcer crater at the tip of the diverticulum (figs. 1 and 2).

### *Summary and Conclusion*

1. A case of massive hemorrhage occurring in an adult from peptic ulceration in Meckel's diverticulum is reported.

2. Exploration is indicated in this type of complication arising from this congenital anomaly, even though all diagnostic studies are negative.

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## CONTINUOUS CAUDAL ANALGESIA IN VAGINAL DELIVERY

### *Report of 702 Cases*

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This paper is a presentation and evaluation of the results obtained with caudal analgesia in a general, non-teaching hospital by the nurse-doctor team advocated by Hingson and others<sup>(1)</sup>. Although only 702 cases are reviewed, this number represents a cross-section of well over 1000 cases. Cases were omitted from the report only when the information on the charts was not complete enough for statistical study. Cesarean sections and gynecologic operations under caudal analgesia were not considered.

In 680 cases a 1.5 per cent solution of Metycaine was used, and in the remaining 22 cases a 0.15 per cent solution of Pontocaine was used. The longest duration of caudal Metycaine anesthesia recorded was 20 hours and 30 minutes. The longest duration of caudal Pontocaine anesthesia was 13 hours and 20 minutes. The average duration of analgesia was three hours and 32 minutes, and the average amount of anesthetic used was 94.4 cc. Tables 1 and 2 show the results of the analgesic agents.



Table 1  
Analgesic Effect

	No. Cases	Percent.
Good .....	645	91.8
Fair .....	44	6.2
Poor .....	10	1.4
None .....	3	0.4

Table 2  
Unpleasant Side Effects

	No. Cases	Percent.
Nausea and vomiting .....	208	29.6
Fall in blood pressure .....	90	12.8
Transient numbness over the entire body and a "jumpy feeling" (symptoms of in- travenous caudal anesthesia) ..	4	0.6

From table 1 it is seen that 98 per cent of the patients obtained what was considered adequate relief, a figure that compares favorably with the results of other analgesics. Supplementary anesthesia was used in 31 cases only (gas in 23 and saddle-block in 8).

Three hundred and one primiparas and 401 multiparas were included in the series. Table 3 shows the types of deliveries performed.

Table 3  
Types of Deliveries

	No.	Percent.
Spontaneous .....	367	52.2
Low forceps .....	237	33.3
Mid forceps .....	64	9.1
Breech extraction .....	34	4.8

As familiarity with the method increased, a larger percentage of the patients were delivered spontaneously, aided by their own efforts and by fundal pressure. Because of the absence of perineal pressure, however, the urge to "bear down" is lacking, and a smaller percentage of spontaneous deliveries results. This is in line with the trend toward prophylactic forceps, which is considered good obstetric practice by present day obstetricians.

The average duration of labor in this series was 11 hours and 30 minutes for the combined first and second stages, and 7.2 minutes for the third stage. The average for primiparas was 13 hours, 42 minutes for the combined first and second stages, and for multiparas, 11 hours and 30 minutes. The averages given in DeLee's textbook<sup>(2)</sup> are 17½ and 12½ hours respectively. The impression is gathered that once labor is definitely in progress, the process is noticeably quickened by the use of conduction analgesia.

Additional data are contained in the following tables:

Table 4  
Estimated Blood Loss

Amount (cc.)	No. Cases	Percent.
0-100 .....	502	71.5
100-250 .....	146	42.7
250-500 .....	38	5.4
500+ .....	16	2.2

Table 5  
Complications of Labor and Delivery

	No. Cases
Transverse arrest .....	27
Persistent occiput-posterior .....	4
Premature separation of placenta .....	1
Placenta previa, marginal .....	1
Incarcerated placenta .....	1

Five sets of twins and 9 premature infants other than twins were delivered. The condition of the infants at birth is tabulated in table 6.

Table 6  
Condition of Infants at Birth

Condition	No.	Percent.
Normal (cried spontaneously and quickly) .....	632	90.0
Cyanotic, but responded to clearing air passages ..	40	5.7
Required resuscitation .....	17	2.4
Showed evidence of atelectasis .....	4	0.6
Stillborn .....	9	1.2

Table 7  
Causes of Fetal Death (Stillborn and Neonatal)\*

Cause of Death	No. Cases	Percent.
Monstrosities .....	5	0.7
Intracranial hemorrhage (proved at autopsy) .....	4	0.6
Erythroblastosis or kernicterus .....	3	0.4

\*None of these deaths could be attributed to the analgesic agent.

No figures concerning the number of cases in which spinal anesthesia was given inadvertently were recorded. However, this did occur several times. The fact was recognized before or after the test dose of anesthetic in every case except one, and labor was conducted under continuous spinal anesthesia; or spinal anesthesia was discontinued, and the patient was given Demerol, opiates, or barbiturates and delivered under inhalation anesthesia. The one case in which the subarachnoid administration of Metycaine was not recognized early is worthy of a more detailed report.

#### Case Report

The patient was a primipara whose labor was progressing very rapidly, and painfully. Thirty cubic centimeters of Metycaine were injected rapidly. The patient ceased breath-

ing almost immediately, became cyanotic, and her pulse became slow and irregular. She was given positive pressure oxygen for over an hour, and epinephrine subcutaneously. She was also given 1 cc. of epinephrine in oil intramuscularly. Fortunately, these measures were effective. Although she had analgesia of the skin to her chin and could move nothing but her eyes, the anesthesia gradually wore off and she began to breathe spontaneously. During this time her labor continued to full dilation, and she was delivered of a normal, living infant, without further anesthesia. She never lost consciousness at any time.

### *Advantages of the Method*

During labor most patients under caudal analgesia lie comfortably, conversing with the nurse or doctor. It is true that some frequently call for the emesis basin, but labor itself causes vomiting in many cases, and the opiates and Demerol are often the offending agents. In most of these cases, while the nurse watches the patient, the doctor can work unimpeded in his office, or sleep comfortably until called to an unhurried delivery. The sense of urgency is removed. The patient is delivered, often without discomfort, and nearly always without excessive pain.

The patients do not become exhausted, since labor proceeds without the rolling, twisting, turning, and straining associated with other methods. Dehydration caused by vomiting and the inability to take fluids by mouth is easily combated with intravenous glucose. A fall in blood pressure is controlled by ephedrine and by turning the patient on her side. The infant attempts to cry even before delivery is completed in many cases.

The incidence of persistent posterior occiput and transverse arrest may be increased by the use of conduction anesthesia, but this drawback is compensated for by the ease in which manual or forceps rotation is accomplished because of the pelvic and perineal relaxation obtained. For the same reason, caudal anesthesia is the best method I have used for breech delivery. Podalic version cannot be easily performed under caudal anesthesia, because the uterus is not completely relaxed. However, this operation is fast losing its place in obstetrics, and caudal anesthesia does not preclude the use of general anesthetics.

Although caudal analgesia is not generally

considered a good method in tests of labor, opinion with regard to this matter is changing. One case in the present series comes to mind in this connection. A small primipara, with a borderline pelvis, labored to full dilation without engagement of the head, although her membranes were ruptured. After several hours of full dilation, with hard labor and without engagement, it was decided to do a cesarean section. Since her labor was so painful, the patient was placed under caudal analgesia to relieve her pain while the arrangements for the section were being made. Within 15 minutes after the anesthetic took effect, the head was on the perineum and the patient was delivered by easy low forceps. Apparently the caudal anesthetic gave just enough relaxation to allow the head to enter the pelvis.

The character and duration of labor are, to a large extent, controlled by the forces of resistance as opposed by the forces of expulsion. Under conduction anesthesia the resisting forces are apparently reduced more than the forces of expulsion, and, as a result, labor progresses more rapidly. The incidence of cesarean section in my practice has been reduced almost to the vanishing point, until now it consists, in the main, of repeat sections, or those done for reasons other than cephalopelvic disproportion. Certainly some of this reduction must be due to the greater willingness of the patient to try a good test of labor, and to the lack of exhaustion attendant upon other forms of analgesia.

### *Conclusion*

Caudal analgesia has been proved as a method safe for both mother and child, provided the contraindications are taken into account, and the proper safeguards and tests are carried out. It results, I believe, in lowered morbidity and mortality in mother and child. Instead of contracting, the field of its use is constantly expanding. It has made the practice of obstetrics comparatively easy and pleasant.

The complications that are associated with older methods of analgesia are singularly reduced with caudal analgesia because the urge to "meddlesome midwifery" is reduced. In fact, the only real danger is that some day the use of caudal anesthesia will mask the rupture, or impending rupture, of the uterus until it is too late for active interference. To



my knowledge, no method of coping with this situation has yet been devised.

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## THE CONCEPT OF PSYCHOSOMATIC MEDICINE

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Since the effect of the emotions was not scientifically studied until within recent times, for centuries man was ignorant concerning many diseases to which he fell victim. He had always known that fright might bring on palpitation, profuse perspiration, and even nausea; that choking sensations might follow rage, and blushing follow embarrassment, and so on. During the past century, however, he observed that cellular disease led to structural alteration, and subsequently to physiologic (or functional) disturbance. It is now known, moreover, that some functional disturbances result in cellular diseases and structural change, and that psychologic disturbances sometimes antedate and cause functional disturbances. These, in turn, may bring about pathologic changes in the cells. Thus is it seen that the *psyche* and the *soma* of every individual are inseparable components; and that far too long have they suffered an artificial dichotomy.

It can not be denied that, at the present, many patients visiting the offices of general practitioners complain of symptoms that can not be explained by any detectable organic disease. In other patients, no definite bodily disease can be found, though many complaints are reported. In fact, virtually 70 per cent of the general practitioners' patients furnish unquestioned proof of the psychosomatic concept of medicine. Many physicians with only meager training in psychiatric techniques, however, have been reluctant to accept this concept. In this scientific era—characterized by two global wars, a deep-seated depression, the discoveries following the conquest of the atom, and many colossal movements of national and international importance—ample evidence against the fallacious belief that mind and body can be dissociated has been furnished.

### *The Physiologic Basis of the Concept*

Although, as has been noted, many physicians were averse to the psychosomatic concept of medicine, today this view is being subscribed to more and more on every hand. Through laboratory experiments, clinical experience, and autopsy findings, scientists and neurosurgeons, in particular, have produced conclusive evidence that the hypothalamus, a tiny area hidden away in a dark recess of the human brain, is an important regulating and coordinating center for both divisions of the autonomic nervous system and for the endocrine glands.

It is not difficult to understand how this powerful regulator of body temperature, water balance, carbohydrate and fat metabolism, gastrointestinal functioning, patterns of sleep and waking, emotional balance, and so on, can bring about changes in various conditions of the periphery of man's entire organism. To the hypothalamus come numerous nerve fibers from the frontal lobes (the source of man's intelligence and personality) and many other important centers; while from the hypothalamus fibers radiate back to the cerebral cortex (frontal lobes) the spinal cord, the medulla, the pituitary gland, and so on. When man becomes worried or harried, these disagreeable and harmful impulses are transmitted to the hypothalamus, causing a dysfunction therein that hampers regulation of the vital functions of the entire organism. As a result, peptic ulcers, renal disturbances, and numerous other ailments develop in man's periphery. It is thus readily seen how a general dysfunction of the hypothalamus is caused when man frets, worries, lives under tension or morbid fear; and how, in turn, the hypothalamus, since it involves such fundamental bodily mechanisms, profoundly alters the whole rhythm of the human organism. Such, in a nutshell, is the concept of psychosomatics.

### *Psychosomatic Disturbances*

Although Plato, Hippocrates, and Socrates, thousands of years ago, voiced their belief in the interrelationship of mind and body, it remained for modern man to show that in at least four major types of disease, disturbances in the individual's thinking, feeling, and behavior can reach such a degree of intensity as to throw his whole body out of balance. These types include digestive ailments, such as colitis and peptic ulcers; heart and circulatory disorders (especially high

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blood pressure); headaches, joint pains, and muscular pains; and asthma and other allergies.

Of particular interest are the findings of the Wittkower Report of 1949<sup>(1)</sup> which provided information regarding the powerful play of emotions in tuberculosis and set forth the view (now wholly substantiated) that an unhealthy mode of living and frequent mental upsets often precede the development of tuberculosis. Wittkower also stressed the importance of love and security as basic requirements of a wholesome development and the absence of these factors as a common feature of the pre-morbid personalities of 785 tubercular patients whom he had observed over a period of thirty months.

Psychosomatic disturbances are commonly manifested as migraine, dermatitis, diarrhea, constipation, diabetes, renal disturbances, thrombosis, angina pectoris, neurotic cough, obsessions, compulsions, and many other sexual psychotic and vasomotor disturbances. According to Weiss, anxiety states with gastrointestinal symptoms constitute the most common of all psychosomatic problems<sup>(2)</sup>.

Whereas many emotions, such as mirth experienced during a meal at the table or during a picnic, and the enjoyment of music, may prove beneficial, the emotions associated with unpleasantness and conflict which have been banished from the conscious and consigned to the *unconscious*, may, if they are allowed to become chronic, prove as detrimental to the body as are toxins and bacteria. Thus, the psychic problems produce in the body, physiologic changes which sometimes seriously alter behavior.

Contrary to the assumption of physicians of the old school, science well knows today that the pains associated with psychosomatic conflicts actually exist. It is, therefore, an exceedingly risky procedure to attempt to make a diagnosis on the basis of presenting symptoms only. The examiner must consider his patient from all aspects, and the disease as an expression of his entire life pattern, including the phylum, of which he is a part. A study of the patient's complete background—including his physical status and onset of illness, heredity, personality factors and their disposition to imbalance, occupations and vocational adjustment, social, familial, and sexual adjustment, as well as his proneness to accident—should therefore be made.

The diagnosis and treatment of psychoneurotic disorders, especially during the war, enabled general practitioners, surgeons, and psychiatrists to acquire fuller recognition of the role played by the psyche in all diseases. During a four-year period one million patients in the Army alone had nervous or mental disorders<sup>(3)</sup>. Is it likely that the incidence of gastrointestinal disorders, peptic ulcers, migraine, colitis, dermatitis, heart affections, hypertension, neurosis, and numerous other complaints would have been so high if the men had stayed at home?

### *The Role of the Emotions*

#### *Unresolved conflicts*

With the assistance of a psychiatrist, many perplexing disturbances manifesting themselves in physiologic diseases of adult life can be traced to unresolved emotional conflicts in childhood. Frequent reference is made today to the significant role played by security in the life of an infant nestling in its mother's embrace. This sense of security, if maintained throughout childhood, is conducive to a more nearly normal adulthood, and constitutes reliable insurance against abnormal developments.

Life situations met unsuccessfully can easily occasion conflicts which are expressed in fears, compulsions, or anxieties. When children, for example, worry over their failures in school and college, when adolescents grow perturbed about sexuality, when young adults suffer because of maladjustment to marital or family relationship, their conflicts may express themselves in dizzy spells, pains in the chest, insomnia, headaches and many other organic discomforts. The family doctor who is trained in the basic principles of psychologic medicine and uses the psychologic approach to his practice can be an invaluable guide.

If, on the other hand, he is not able to attach significance to tics, convulsions, night terrors, fantasies, cruelty, chronic disobedience, temper tantrums, and other undesirable emotional reactions, all of which are frequently the result of improper rearing by misguided or ignorant parents, then the emotionally disturbed individuals are likely to develop serious maladjustments during critical periods in later life.

#### *The need for security*

During these critical days when, in Shakespeare's words, "fears and scruples shake



us," let it be remembered that strong emotions can disastrously affect the nervous system, producing numerous psychosomatic illnesses. Men, therefore should strive to attain a greater degree of personal, national, and international security. The perturbed inhabitants of New Delhi, India, felt more secure when police authorities recently sealed the world's tallest minaret, Quth Minar, from which, since the twelfth century, despairing lovers, failing students and unsuccessful individuals had leapt to certain death 234 feet below.

As long as individuals and nations allow patterns of destructive fear to dominate their lives, there will be an increase of psychosomatic problems. Commonly encountered today are the crippling fear of pain, loneliness, loss of job, public censure, old age, loss of marital love, mental disease, failure, and death.

### *The Physician's Responsibility*

When the individual, suffering because of emotional maladjustment, seeks help from his physician in dealing with coercive environment, what can the general practitioner do for him?

The family doctor, who holds a position of distinction and respect within the community, should recognize no rigid demarcation between the mental and physical aspects of his patients. Furthermore, he should do everything possible to ward off the possibility of future nervous disorders when he first suspects unhealthy mental states in his patients.

Deutsch<sup>(4)</sup> states that physicians who would like to learn how to treat psychosomatic disorders must learn first to make psychosomatic diagnoses. Continuing, he says:

"Then they should treat the patient until the symptoms for which he came, disappear, which they do when the need for somatic expression is removed or when the bodily symptoms are reconverted into emotional symptoms. When the latter has occurred, the patient will accept treatment from a psychiatrist much more readily. For this reason, transfer to a psychiatrist is best done after the patient has had preliminary treatment by a physician. If the physician's treatment has made the bodily symptoms disappear, his role as therapist is concluded."

If an internist wants to go into psychosomatic research or teaching, he should be acquainted with the psychology of the child, adolescent and adult, as well as with involution and old age, and with the theory of adjustment. He should be informed as to the

emotional problems of the sick and acquainted with the psychopathology of the neuroses and psychoses. He should know interviewing techniques and the various types of treatment from the simple handling of a situation to psychotherapy.

The time has come when the physician will have to consider the "other side of his patient," and there seems to be no reason why the general practitioner will not be able to do so.

### *Conclusion*

Normal behavior will never occur in a mind without a body, or *vice versa*. Why then should any physicians or patients continue to consider the status of one to the exclusion of the condition of the other? The living organism, itself a whole personality, will admit of no splitting but will react favorably to treatment toward normal behavior only when mismanaged body functions are looked upon as the result of disturbed emotions.

In view of the prediction that diseases will increase within the next decade, it is hoped that the wide acceptance and application of the psychosomatic concept of medicine will steadily continue.

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## IATROGENIC DISEASE

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The word "iatrogenic" is derived from the Greek words, *iatro*, meaning physician or therapy, and *genesis*, of course meaning creation. Iatrogenic disease, therefore, is disease created by the physician. To broaden the meaning somewhat, we might say disease *aggravated* by the physician.

During the first twenty-five years of this century it was sincerely felt that all subjective symptoms must be explained by the presence of an organic or structural defect. Within the past twenty-five years, with the incidence of illnesses resulting from two world

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wars, realization has come that many diseases stem from disturbed *physiology* rather than disturbed *anatomy*. Generally speaking, such functional disturbances arise from some emotional upset, such as insecurity, fear, anxiety, and unhappiness in the life situation.

During the past ten to fifteen years it has been recognized that many organic diseases have their origin in disturbed emotional states. Chief among them are peptic ulcers, essential hypertension, rheumatoid arthritis, asthma and other allergic states, and dysmenorrhea.

In the light of the high emotional content of these diseases, it is easy to see how a doctor's own emotional reactions to his patient's disease may influence the patient's reaction to his symptoms. What a doctor tells his patient also has great influence.

We doctors are guilty of many specific practices that tend to create invalidism and aggravate existing disease. On careful physical examination, *some* abnormality or other can be found in nearly everybody. Many times, because we cannot find any definite pathologic condition, we are inclined to blame the symptoms on some trivial abnormality. These trivial findings may lead us to prescribe much needless therapy.

#### *Unnecessary Surgery*

Many a thyroid gland has been removed because of a rapid pulse and an erroneous basal metabolism test. Surgery does not relieve symptoms that are due to a psychoneurosis. Further, in such cases, there is the ever-present danger of creating hypothyroidism with all its woes.

Cystic ovaries, malposition of the uterus, and slight thickening of the fallopian tubes often lead to needless surgery. Again, when a patient's dysmenorrhea is due to psychogenic causes, and when her backache is due to fatigue or flat feet, surgery will be of no benefit. Furthermore, such surgery often leads to an early menopause.

Probably the worst thing that surgeons do is to operate unnecessarily for adhesions and so-called "chronic appendicitis." I recall one young girl who had a definite situational psychoneurosis that caused many vague gastrointestinal symptoms. Her surgeon, without paying any attention to her emotional make-up, removed her "chronic appendix." As the symptoms persisted, she subsequently had two more operations for "adhesions," neither of which brought relief. Her illness

persisted more than five years. She was cured only when marriage brought an end to her unhappy situation.

#### *Errors in Medical Practice*

*Chronic alcoholism* always presents a problem. Nearly all alcoholics demand some sort of sedation for their hang-overs. Usually, we prescribe one of the barbiturates. Many such patients, as a result of the indiscriminate use of these drugs, have become barbiturate addicts. Do you know of anything worse?

*Asthma* presents another problem. A large number of asthmatic patients have become narcotic addicts because doctors prescribe morphine and other narcotics too freely. Fortunately, that danger is now realized, and addiction from that cause is relatively infrequent.

Probably we do our greatest harm in dealing with *cardiovascular disease*. The layman hears of the comparatively few sudden deaths due to coronary thrombosis and to cerebral hemorrhage. He hears nothing of the cardiac victims who live on, year after year, with chronic congestive failure, or of the arteriosclerotic patients who gradually fade away with nephritis and heart failure. Consequently, to his mind, heart disease and high blood pressure are causes of sudden death and are greatly to be feared.

Many patients have had the label "nervous heart" put upon them when the doctor could find nothing more than a simple tachycardia to explain the symptoms. In such a case, wouldn't it be better to tell the patient definitely that he has no heart disease, and try to explain the mechanism behind his symptoms?

In dealing with actual heart disease, it is easy to make a cardiac invalid by telling the patient that he has angina pectoris, or that he has a heart leak. Many a useful citizen has been made an invalid by such a simple statement as: "You have heart disease, you had better take it easy." Wouldn't it be better to tell him clearly what he has, what the danger signs are, and what is likely to produce those signs? Be specific! Tell him to learn his load limit, stay under it, and forget about his heart.

The layman knows that digitalis is a heart drug. When it is prescribed for him, he knows that he has heart disease. The indiscriminate use of this drug, therefore, is to be deplored. Its indications are relatively few and well



defined. It should never be used without definite indication.

Victims of *hypertension* constitute a terrific problem. Except for the aged arteriosclerotics, these people are "eager beavers." They are also likely to be worriers. It doesn't help one of these patients to be told: "My goodness! Your blood pressure is 220. It's a wonder you got here without having a stroke!" Wouldn't it be better to prescribe the proper medicines, explain his disease, stressing the point that he is not likely to have a stroke, and offer reassurance?

### *Practices That Create Alarm*

Much harm can be done by giving alarming information. One of my patients had an episode of acute anxiety because I told him that he should have an operation for his stomach ulcer, because ulcers in the location of his sometimes become cancerous.

Even a doctor's facial expression may alarm a patient. If, in taking a blood pressure, the doctor looks surprised and concerned, his concern is immediately transmitted to the patient. All of us have been frightened by some physical findings or unexpected event. If we show that fright, the patient is immediately made worse. Imperturbability and a poker face are absolute essentials in good medical practice.

Another practice that may stir up anxiety is seeing patients too often. Seeing a patient two or three times a week for his blood pressure does not help him and, in all probability, serves to focus his attention more on his complaints. Seeing him too often may make him think he is much sicker than he really is.

Why do we do such things to our patients? Primarily, because we are not sufficiently sure of our diagnoses. We lack the courage of our own convictions.

The science and art of medicine is so great that no one doctor can master all of it; therefore, we sometimes err through ignorance. Sometimes we are so pressed by work that we don't take time for adequate explanations and instructions.

In a profession as large as ours, there must, unfortunately, be a few black sheep. These men frequently frighten their patients into needless consultations, purely from avarice. Many a self-made diagnosis is confirmed by a doctor because the patient seems to demand it and the doctor fears that the patient will go to someone else unless he concurs.

### *Conclusion*

There is no set procedure for preventing the iatrogenesis of disease. Since every patient is a law unto himself, it behooves us to study each one carefully, and be discreet in what we say to him.

May I close with a plea and a quotation? The plea is old: "If you can do no good, be sure you do no harm." The quotation is from Oliver Wendell Holmes. He said: "The best doctor is the best inspirer of hope."

### *Discussion*

Dr. Wingate M. Johnson (Winston-Salem):

In his brief paper Dr. McNeill has given much food for thought. I am sure that all of us have at times been guilty of alarming a patient unnecessarily. Unfortunately, the so-called neurotic patient is particularly susceptible to suggestion. At least this type of patient needs, more than anything else, understanding and the right sort of sympathy. It is a mistake to leave with them the impression that their symptoms are purely imaginary, and it is just as big a mistake to lead them to believe that a simple tachycardia from excitement may mean a serious heart disease, or that abdominal discomfort from lack of balance in the autonomic nervous system means that an operation is indicated. One of the things a doctor has to do is to keep his balance between the psychic and somatic elements of patients' ailments.

One point I would like to emphasize is that there is no substitute for time in dealing with neurotic individuals. Time is needed to get an adequate history, which is even more important than the physical examination. Securing such a history is not only essential to a diagnosis, but it is an important part of the therapy. A carefully taken history gives the patient a feeling of confidence in the physician which he cannot get from a hurried question or two and a rapid physical examination. I should like to emphasize Dr. McNeill's caution in the importance of selecting the proper words to use in telling a patient of his condition. Dr. Malford Thewlis, in his book on geriatrics, has a section called "Logotherapy"—meaning treatment by words. Dr. Thewlis makes the statement that it is possible to kill a patient with words—or conversely to benefit him greatly by repeating the right words.

Dr. McNeill is to be congratulated on bringing this subject to our attention in such a forceful way, and I am sure that all of us will be helped by his presentation.

There should be no moratorium on basic research, even in times of emergency. Research must provide a reservoir of facts and principles on which procedures can be based when the need arises. Too often we wait until confronted with an emergency, then make an appropriation and demand a miracle. Intensity can be substituted for time only to a limited extent, or not at all, in solving many scientific problems; It is just as wise to provide for "scientific stockpiles" as for stockpiles of critical materials; and the neglect of one can prove just as fatal as the neglect of the other. We need to emancipate ourselves from intellectual naivete with respect to the miraculous omnipotence of science to repair the wreckage of ignorance by ex post facto application of scientific laws. We need perspective; we need wisdom; we need time.—Stakman, E. C.: *Science and Human Affairs*, Science 113: 137 (Feb.) 1951.

## THE MEANING OF HIPPOCRATES IN THE MEDICAL WORLD OF TODAY

FREDERICK R. TAYLOR, M.D., F.A.C.P.

### HIGH POINT

The wise men of the Golden Age of Greece were the mightiest pioneers of thought in all human history. Their thinking was not merely along immediately practical lines, in which the thinkers of the modern scientific age have far outstripped them, but dealt with the basic fundamental principles of philosophy and of thought itself. Most fundamental of all was their obvious assumption of absolute freedom of thought as a *sine qua non* of progress. Even the tragic but sublime case of Socrates does no violence to this statement so far as the real thinkers were concerned, for Socrates upheld his right of freedom of thought and expression to the death, in the face of judges and enemies who were anything but great thinkers. Such insistence on freedom of thought and expression is desperately needed in the ideology-ridden world of today, in which a large proportion of the people of the earth dare not call their souls their own.

Foremost among these mighty pioneers of thought, so far as medicine is concerned, stands Hippocrates. Of the details of his life we know almost nothing. We are told by Soranus that he was born on the island of Cos in the fifth century B.C.—perhaps about 460, which would make him 33 years older than Plato. A combined medical school, hospital, and health resort was on the island. Virtually all the rest of the purported life and background of Hippocrates is legendary. I can think of no other supremely great medical man of whom it is so exclusively true that by his written works we must know him.

### Contributions to Medicine

Among the basic contributions of Hippocrates to medicine, which are as valid today as ever, we must consider the following:

1. He would have none of slavery to tradition or authority, but insisted on direct, first-hand, personal observation. He observed not only the patient but his background, including his family, associates, manner of life, and the forces of the world of nature as a whole which played on him. His treatise *On Airs,*

*Waters, and Places*, the first book ever written on the subject, shows this insistence on personal observation.

2. He recorded his observations for posterity. By doing so he not only gave us the finest case records of antiquity—valuable for present day study—but set an example for future generations of physicians to follow, although it was more than fifteen centuries before they did so in any appreciable number.

3. He bequeathed us the principle that the patient as well as his disease must be considered.

4. In his profound general medical philosophy and in the development of a great code of ethics in his celebrated Oath, he laid down the fundamental standards of medical practice for all time.

In discussing diseases or injuries in a systematic manner today, it is customary and convenient to utilize several subheadings. Chief among these are History, Etiology, Pathology, Symptomatology, Diagnosis, Prognosis, Prophylaxis, and Treatment. Let us examine Hippocrates' contributions to these various phases of medicine in so far as they have meaning for us today.

### History

Even though he wrote a treatise *On Ancient Medicine*, Hippocrates never formulated a systematic history of medicine or of disease in general. However, his works are shot through with references to the ideas of others, ancient and contemporary, with which he often disagrees. Hippocrates created medical history more than he transmitted it. It has already been noted that he took careful histories of his patients, noting the manifold factors to be considered in each case.

### Etiology

Perhaps as much as any medical man who ever lived, Hippocrates studied and understood the predisposing causes of diseases. That most of his notions of specific etiology have been set aside by modern science does not lessen the significance of predisposing causes. Today, apart from industrial medicine and public health, such causes are often passed over too lightly; so the Old Master's work in this field should have great meaning for us. Consider, for example, this passage from his work *On Airs, Waters, and Places*:

"Whoever wishes to investigate medicine properly, should proceed thus: in the first place to consider the seasons of the year, and what effect each of them produces . . . Then the winds, the hot and the cold, especially such as are common to

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all countries, and then such as are peculiar to each locality. We must also remember the qualities of the waters, for as they differ from one another, so also do they differ much in their qualities. In the same manner, when one comes into a city to which he is a stranger, he ought to consider its situation, how it lies to the winds and the rising of the sun; for its influence is not the same whether it lies to the north or the south, to the rising or to the setting sun. These things one ought to consider most attentively . . . and the mode in which the inhabitants live, and what are their pursuits, whether they are fond of drinking and eating to excess, and given to indolence, or are fond of exercise and labor, and not given to excess in eating and drinking."<sup>(1)</sup>

No doubt, too, Hippocrates found "these matters" important in the field of prophylaxis.

The Father of Medicine insisted on the natural operation of cause and effect. In his famous work *On the Sacred Disease*, he wrote:

"It is thus with regard to the disease called Sacred: it appears to me to be no more sacred than other diseases, but has a natural cause from which it originates like other affections."<sup>(2)</sup>

### Pathology

Of pathology, over and above the objective symptoms which may be observed in the living patient, Hippocrates had little to say. However, in the first paragraph of his treatise *On the Surgery*, he wrote:

"It is the business of the physician to know, in the first place, things similar and things dissimilar; those connected with things most important, most easily known, and in anywise known; which are to be seen, touched, and heard; which are to be perceived in the sight, and the touch, and the hearing, and the nose, and the tongue, and the understanding, which are to be known by all the means we know other things."<sup>(3)</sup>

He was evidently a master of physical diagnosis.

Despite the Greek prejudice against necropsies, it seems strange that such a great pioneer and exponent of firsthand observation makes no mention of them, so far as I know. Of his forty-two priceless case records, which Garrison<sup>(4)</sup> tells us are almost the only records of the kind for the next 1700 years, twenty-five ended with the death of the patient. However, none of the reports of these fatal cases go beyond the patient's death to mention any kind of postmortem examination.

### Symptomatology

In this field Hippocrates showed his genius for observation, as two brief case records taken from Section III, Book I, of the work entitled *Of the Epidemics* will illustrate.

"CASE VIII. Erasmus, who lived near the Canal of Bootes, was seized with a fever after supper;

passed the night in an agitated state. During the first day quiet, but in pain at night. On the second, symptoms all exacerbated; at night delirious. On the third, was in a painful condition; great incoherence. On the fourth, in a most uncomfortable state; had no sound sleep at night, but dreaming and talking; then all the afternoon worse, of a formidable and alarming character; fear, impatience. On the morning of the fifth, was composed, and quite coherent, but long before noon was furiously mad, so that he could not constrain himself; extremities cold, and somewhat livid; urine without sediment; died at sunset. The fever in this case was accompanied by sweats throughout; the hypochondria were in a state of meteorism, with distention and pain; the urine was black, had rounded substances floating in it, which did not subside; the alvine evacuations were not stopped; thirst throughout not great; much spasms with sweat about the time of death."<sup>(5)</sup>

We are not told as much of the details of the pain as we might wish, but certainly it involved the "hypochondria," which probably means the whole upper portion of the abdomen. No mention is made of a chill. However, we are told much in few words. As it stands, this case would be a beautiful subject for a modern clinicopathologic conference, had a necropsy been done. The Canal of Bootes suggests mosquitoes; the black urine, blackwater fever, though in that disease we would expect to find chills. Gallbladder or pancreatic disease, with black urine, probably would indicate jaundice. What were the round objects floating in the urine? Had some unknown condition caused true hematuria, with blood clots in the urine, we would expect Hippocrates to recognize them as such and would also expect sediment. Anyway, what condition causing hematuria would kill on the fifth day of the disease? These points, as the French might say, give one furiously to think!

The next case gives an adequate clinical record in eighty words.

"CASE IX. Criton, in Thasus, while still on foot, and going about, was seized with a violent pain in the great toe; he took to bed the same day, had rigors and nausea, recovered his heat slightly, at night was delirious. On the second, swelling of the whole foot, and about the ankle erythema, with distention, and small bullae (phlyctenulae); acute fever; he became furiously deranged, alvine discharges bilious, unmixed, and rather frequent. He died on the second day from the commencement."<sup>(6)</sup>

### Diagnosis

It has already been noted that Hippocrates did not attach diagnostic labels to his case records, but that he had the attributes of a great diagnostician is indubitable. Diagnosis must always attempt to answer two fundamental questions, if it is to be complete in any broad sense. One is, "What kind of disease does the patient have?"; the other, "What

kind of patient does the disease have?" The ancients realized the importance of the latter question. When our profession became unduly subservient to the great German pathologists of the nineteenth and early twentieth centuries, some of its members lost sight of the *patient*, and treated diseases without treating patients. In recent years, under the term "psychosomatic medicine," we have returned to a proper consideration of the patient, which the *best* clinicians *never* forgot, even in the era of German scientific dominance. "Psychosomatic medicine" is merely a big term for well balanced, intelligent, sensible medicine.

The answers to both fundamental diagnostic questions depend on the three factors of *interrogation*, *observation*, and *interpretation*. In the treatise *On Regimen in Acute Diseases* we find:

"Those who composed what are called 'The Cnidian Sentences'\* have described accurately what symptoms the sick experience in every disease, and how certain of them terminate; and in so far as a man, even who is not a physician, might describe them correctly, provided he put the proper inquiries to the sick themselves what their complaints are. But those symptoms which the physician ought to know beforehand without being informed of them by the patient, are, for the most part, omitted, some in one case and some in others, with certain symptoms of vital importance for a conjectural judgment."<sup>(7)</sup>

We may infer from this passage that the Father of Medicine had some of the deductive and interpretative skill of Dr. Joseph Bell of Edinburgh, the famous prototype of Sherlock Holmes. Always, Hippocrates insisted on getting all the significant evidence possible and evaluating it *as a whole*, rather than making snap diagnoses by intuition, a procedure which the late Dr. J. Chalmers Da Costa used to characterize as a rapid means of reaching a wrong conclusion.

### Prognosis

In the field of prognosis, Hippocrates was a giant. In *The Book of Prognostics* he gave us *the* great work on the subject. It contains the world-famous description of what is known to us as the Hippocratic facies of evil portent:

"2. . . . a sharp nose, hollow eyes, collapsed temples; the ears cold, contracted, and their lobes turned out; the skin about the forehead being rough, distended, and parched; the color of the whole face being green, black, livid, or lead-colored."<sup>(8)</sup>

Here is another gem from this book:

"24. . . . One must judge of children as of others, which will die and which will recover, from the whole of the symptoms, as they have been specially described."<sup>(9)</sup>

\* The School of Cnidos was the chief rival of the School of Cos.

Obviously, this statement is equally applicable to diagnosis, as has been mentioned.

In the *Aphorisms*<sup>(10)</sup>, Section II, we find:

"43. If erysipelas of the womb seize a woman with child, it will probably prove fatal."

In Section VII of the same treatise:

"12. Phrenitis [i.e., inflammation of the brain, or, as we would say today, meningitis] along with pneumonia is bad.

"13. Convulsion or tetanus, coming upon severe burning, is bad.

"14. Stupor or delirium from a blow on the head is bad.

"15. From a spitting of blood there is a spitting of pus.

"16. From spitting of pus arise phthisis and a flux; and when the sputa are stopped, they die.

"17. Hiccup in inflammation of the liver is bad.

"18. Convulsion or delirium supervening on insomnolency is bad. . . .

"20. Mortification or suppuration upon erysipelas is bad.

"21. Suppuration upon a protracted pain of the parts about the bowels is bad. . . .

"86. In a chronic disease, an excessive flux from the bowels is bad.

### Prophylaxis

All that has been said of Hippocrates' knowledge of the predisposing causes of disease under the heading of etiology may be applied in the field of prophylaxis, so far as such causes can be avoided or removed; and there seems no reason to doubt that the Old Master was the greatest authority of his day in preventive medicine.

### Treatment

Naturally, modern methods of treatment have largely superseded those of Hippocrates, but his broad general concept of the necessity of knowing what to do and doing it, and, equally important, of knowing what *not* to do and *not* doing that, is one of the eternally valid principles of treatment. Anyone who has been a patient in the hospital of some modern medical teaching center must wonder if, with all our marvelous technical knowledge, we may not be forgetting the essential part played in good therapy by physiologic rest! There are still many times when "masterly inactivity," as Dr. John B. Deaver used to call it, is the best treatment a patient can get.

### Contribution to Philosophy

This supreme medical philosopher of antiquity has left us many priceless pearls of wisdom, not only in his famous *Aphorisms*, but scattered throughout his works. In the treatise *Of the Epidemics*, Section II, he wrote:

"5. The physician must be able to tell the antecedents, know the present, and foretell the future—must meditate these things, and have two special



objects in view with regard to diseases, namely, to do good or to do no harm. The art consists in three things—the disease, the patient, and the physician. The physician is the servant of the art, and the patient must combat the disease along with the physician.”<sup>(11)</sup>

In the first paragraph of the work *On Fractures*, we read:

“... But many other things in our art are judged of in this manner, for people rather admire what is new, although they do not know whether it be proper or not, than what they are accustomed to and know already to be proper; and what is strange, they prefer to what is obvious.”<sup>(12)</sup>

How the Old Master knew human nature!

Shrewd worldly wisdom mixed with a fine understanding of good treatment in the light of the resources of his day is found in the following passage from the work *On the Articulations*:

“63. In cases of complete dislocation of the ankle-joint, complicated with an external wound, whether the displacement be inward or outward, you are not to reduce the parts, but let any other physician reduce them if he chooses. For this you should know for certain, that the patient will die if the parts are allowed to remain reduced, and that he will not survive more than a few days, for few of them pass the seventh day, being cut off by convulsions, and sometimes the leg and foot are seized with gangrene. . . . But if not reduced, nor any attempts at first made to reduce them, most of such cases recover.”<sup>(13)</sup>

Again, in the same treatise we find:

“78. The prime object of the physician in the whole art of medicine should be to cure that which is diseased; and if this can be accomplished in various ways, the least troublesome should be selected; for this is more becoming a good man, and one well skilled in the art, who does not covet popular coin of base alloy.”<sup>(14)</sup>

(Attention, not only medical racketeers, but also certain modern patients who demand “the works” when they don’t need them!)

The *Aphorisms*<sup>(10)</sup> constitute a solid book of medical philosophy. Beginning with one of the most famous aphorisms in the whole field of human thought, “Life is short, and the Art long; the occasion fleeting\*; experience fallacious, and judgment difficult,” the work is a rich mine of wisdom. So many of the aphorisms have already been quoted, that only one more, from Section VII, the concluding aphorism of them all, will be added:

“87. Those diseases which medicines do not cure, iron [the knife?] cures; those which iron cannot cure, fire cures; and those which fire cannot cure, are to be reckoned wholly incurable.”

Finally, in Hippocrates’ tiny treatise of one and a half pages *On the Law*<sup>(15)</sup> we read:

“... physicians are many in title but very few in reality.

“2. Whoever is to acquire a competent knowledge of medicine, ought to be possessed of the following advantages: a natural disposition; a favorable position for the study; early tuition, love of labor, leisure. First of all, a natural talent is required; for when Nature opposes, everything else is in vain; but when Nature leads the way to what is most excellent, instruction in the art takes place, which the student must try to appropriate to himself by reflection, becoming an early pupil in a place well adapted for instruction. He must also bring to the task a love of labor and perseverance, so that the instruction taking root may bring forth proper and abundant fruits.”

What sound advice for both prospective medical students and medical school admissions committees today!

“3. Instruction in medicine is like the culture of the productions of the earth. For our natural disposition is, as it were, the soil; the tenets of our teacher are, as it were, the seed; instruction in youth is like the planting of the seed in the ground at the proper season; the place where the instruction is communicated is like the food imparted to vegetables by the atmosphere; diligent study is like the cultivation of the fields; and it is time which imparts strength to all things and brings them to maturity.”

“4. Having brought all these requisites to the study of medicine, and having acquired a true knowledge of it, we shall thus, in traveling through the cities, be esteemed physicians not only in name but in reality. But inexperience is a bad treasure, and a bad fund to those who possess it, whether in opinion or reality, being devoid of self-reliance and contentedness, and the nurse of both timidity and audacity. For timidity betrays a want of powers, and audacity a want of skill. There are, indeed, two things, knowledge and opinion, of which the one makes its possessors really to know, the other to be ignorant.

“5. Those things which are sacred, are to be imparted only to sacred persons; and it is not lawful to impart them to the profane until they have been initiated in the mysteries of the science.”

### Conclusion

The works of Hippocrates show us beyond peradventure that, though methods improve as knowledge increases through the ages, the fundamental basic principles of medicine remain the same, yesterday, today, and forever.

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12. *Ibid.*, p. 171.
13. *Ibid.*, p. 262.
14. *Ibid.*, p. 273.
15. *Ibid.*, pp. 331-332.

\* Some translate the word “instant” rather than “fleeting.”

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ciples of Medical Ethics of the American Medical Association,*  
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JUNE, 1951

### THE NINETY-SEVENTH ANNUAL SESSION

The ninety-seventh annual session was one of the best in the history of the State Medical Society of the State of North Carolina. The weather was well nigh perfect, the papers presented were of a high order, the exhibits, both scientific and technical, were interesting and informative, and the guest speakers came up to expectations. Again the parent American Medical Association was well represented. President Elmer Henderson could not come, but sent a most acceptable replacement in Secretary George Lull, who addressed the First General Session on "1951: Medicine's First Year of Grace." North Carolina's native son, Dr. Frank Wil-  
son, deputy medical director of the Ameri-

can Medical Association Washington office, and Mr. Aubrey Gates, field director of the American Medical Association Rural Health Committee, both spoke at the Officers' Breakfast.

An excellent innovation this year was the impressive memorial service held Sunday evening, presided over by President Roscoe McMillan. After the innovation Dr. Daniel S. Currie, chairman of the Committee on Necrology, read the names of the members who had died since the 1950 session of the Society, and the audience stood for a minute in silent tribute to them. A splendid musical program was then rendered by the Flora Macdonald College Choral Club, under the direction of Dean Robert Smith. The exercises were concluded with a sermon by Rev. C. Sylvester Green, D.D.

The Executive Committee had a busy Sunday, preparatory to the meeting of the House of Delegates on Monday; but even with much of the way being cleared for the larger body, it was in session until almost midnight. Much of the time was consumed by a lengthy discussion of the report of the Committee on Prepaid Medical Service, presented by Dr. O. Norris Smith of Greensboro. The report as finally adopted by a large majority is to be found on page 243 of this issue. It is to be hoped that the Committee will be given the support of the members of the Society.

Dr. E. B. Lattimore of Shelby was elected as North Carolina's General Practitioner of the Year. Last year, it may be recalled, he was runner-up to Dr. Roscoe McMillan, and this year he won the honor by a large majority.

The First General Session began at 9 a.m. on Tuesday, but was preceded by the Officers' Breakfast at 7:30. The breakfast, as heretofore, was well attended, and those present were well repaid for their early rising by the excellent program arranged. In addition to Dr. Wilson and Mr. Gates, Dr. Maurice Pincoffs, professor of medicine at the University of Maryland, spoke on "Maryland's Medical Program for the Indigent."

After the call to order and invocation, the first business of the General Session was the



report of the Committee on the Moore County Award. Dr. Parker Beamer, professor of microbiology and associate professor of pathology at Bowman Gray, was presented with the gold medal for his paper, "Studies on Experimental Leptospirosis (Weil's Disease)."

In addition to Dr. Lull, other visiting guest speakers at this session were Dr. Harry H. Gordon of Colorado, who spoke on "Some Problems of Prematurity"; Dr. Robert H. Flinn, consultant, Health Resources Office, Washington, "The Physician's Role in Civil Defense"; and Dr. Robert Fleming of Boston, "A Medical Concept of Chronic Alcoholism." A high light of this morning and of the whole session was the presentation of the High School Essay Contest winner, Joe Baxter Roberson of Candler. Joe's paper also won second prize in the National Contest, sponsored by the Association of American Physicians and Surgeons. This paper will be published in an early issue of the *North Carolina Medical Journal*.

The President's Dinner Tuesday night was featured by two excellent addresses, Dr. Roscoe McMillan's "Your Business and Mine," which appeared in last month's *Journal*, deserves to be ranked with the best of our Society's presidential addresses. It merits a thoughtful reading and re-reading, even by those who may have heard it. Dr. Howard Rusk, the dynamic head of New York University's Department of Physical Medicine and Rehabilitation, and chairman of the National Advisory Committee to Federal Selective Service System, spoke on "Medicine, Mobilization, and Manpower." It is doubtful if any guest speaker of our State Society ever held his audience more completely spellbound than did he. The prolonged applause given both speakers was proof of the genuine appreciation of the audience.

After the dinner, Henry L. Scott gave a humorous piano recital which seemed to appeal equally to musicians and non-musicians. After this the President's Ball began about 11 p.m. and continued until the wee small hours.

The effect of the late hours kept by many was reflected in the opening of the Second General Session. Even though it began half an hour late, only a handful were present for the first paper. All papers were good, but the high light of the session was Dr. Philip Thorek's discussion of jaundice. According to

custom, the General Session was recessed at 12 noon for the Conjoint Session with the State Board of Health. Dr. Roy Norton's address, which was full of meat, will be published in an early issue of this journal.

After the session was resumed, Drs. W. M. Nicholson and John B. Graham were elected to succeed themselves for another four year term on the editorial board of the *North Carolina Medical Journal*.

The Nominating Committee brought in its report at the final meeting of the House of Delegates on Wednesday afternoon. It may be recalled that this committee was appointed at the 1950 Session, and has had a year for deliberation. Their report, which apparently met with general approval and was accepted unanimously, was as follows: President-elect, Dr. J. Street Brewer; first vice-president, Dr. Forrest Houser; second vice-president, Dr. A. L. Daughtridge; Speaker of the House of Delegates, Dr. Roscoe D. McMillan; Vice-Speaker of the House of Delegates, Dr. Paul F. Whitaker; members of the North Carolina State Board of Health, four year terms, Drs. G. Grady Dixon and G. Curtis Crump; delegates to the Virginia Society, Drs. John R. Bender, Powell G. Fox, and John A. Payne, III; to the Tennessee Society, Drs. V. H. Duckett, H. B. Ditmore, N. F. Lancaster; to the Georgia Society, Drs. C. H. Hemphill, W. F. Hollister, and W. M. Peck; to the South Carolina Society, Drs. Thomas Byrnes, L. B. McDonald, Claude Milhorn; to the North Carolina Dental Society, Dr. W. R. Berryhill.

At the third and final General Session, Dr. Fred Hubbard of North Wilkesboro was installed as president. Dr. Hubbard has been one of the hardest working and most faithful members of the State Society, and richly deserves the honor. President Roscoe McMillan has set a record for achievement during the past year, and Dr. Hubbard's many friends know that he will prove a worthy successor. And looking ahead, Dr. Street Brewer can be expected to maintain the high standard of his predecessors.

\* \* \*

## NATIONAL FUND FOR MEDICAL EDUCATION

A meeting held on May 16 was called by President James B. Conant of Harvard "one of the most important held in New York since the end of World War II." This meeting accomplished the establishment of the National Fund for Medical Education, with former President Herbert Hoover as honorary chairman and Mr. S. Sloan Colt, president of the Bankers Trust Company, New York, as president. Its board of sixty-six trustees is composed of distinguished men from all parts of the country. Its advisory council of twenty is composed of leading university presidents and members of the Council on Medical Education and Hospitals of the American Medical Association and of the Executive Council of the Association of American Medical Colleges.

As the *Journal of the American Medical Association* (May 19) stated editorially: "The objective of the Fund is to raise annually from voluntary sources substantial sums for the support of the nation's medical schools. . . . The Fund has set a goal of \$5,000,000 to be raised during its first year.

The American Medical Education Foundation, which began with a \$500,000 fund from the American Medical Association, will merge its contributions with the National Foundation. In his address before the organizational meeting, President Elmer Henderson made it plain that the doctors of America were not to relax their efforts on behalf of medical education. "We pledge you," said he, "that we shall not relax our efforts to secure through our foundation ever increasing support from the medical profession for this important undertaking."

In his *Secretary's Letter* for May 28, Dr. George Lull said: "The meeting made one point crystal clear: that a determined effort is going to be made by industry, the medical profession, organized labor, agriculture, universities and scientific and educational foundations to meet the critical financial needs of the medical schools voluntarily instead of depending on government assistance. A federal aid to medical education bill (S. 337) is pending in the senate. The bill carries grave danger of federal control of the nation's medical school."

More and more it is evident that the reaction—inevitable for the United States of

America—against the encroachments of socialism is well under way. It is fitting that the medical profession should have a part in the salvation of our freedom.

\* \* \*

## THE VETERANS ADMINISTRATION RED TAPE

It is exceedingly difficult for a layman to understand why doctors object to lay control of medical practice. A recent communication to a Winston-Salem doctor from the adjudication officer of the Veterans Administration will help to explain the doctors' attitude. The name of a veteran was typed at the top of the following form letter:

Dear Doctor:

The veteran named above has made application to the Veterans Administration for disability compensation and has stated that he was treated by you professionally on or about 1948.

Disability compensation is granted to ex-service persons who are found to be suffering from a disease or injury disabling to an appreciable extent which is attributable to military or naval service.

In order that the Veterans Administration may arrive at an equitable decision in this case it is essential that all information pertinent to any disease or injury from which this person may have suffered, either during the period of his military or naval service or subsequent thereto, be developed.

Appreciating, therefore, your desire to be of assistance to him in enabling him to secure the benefits to which he may be entitled under the law, it is respectfully requested that you submit under oath the information solicited on the reverse side of this letter. An addressed envelope which requires no postage is enclosed for your convenience in returning this form.

Very truly yours,

On the reverse side was a form to be filled out asking for information, preferably from office records. Two and one-half inches of typewriter paper was allotted for "a verbatim transcript of such records." Inasmuch as the report to the patient's doctor covered a page and a half of typing, single spaced, it is hard to see how it could be squeezed into two and one-half inches.

At the bottom was left a space for the paper to be subscribed to and sworn to by a notary public, and for a notary public's seal. Finally, a penalty of \$1,000 fine, one year's imprisonment, or both was threatened, in case any false or fraudulent statement should be made.

Any civilian doctor who has attempted to get information from a veterans hospital knows quite well that it is necessary to obtain a request in writing from the patient who was treated in this hospital; yet no



such authorization was granted in the letter sent out from the Veterans Administration.

It seems to a plain, blunt civilian doctor that it is hardly fair to expect him to transcribe a report on a former patient, and then to have it assumed that he will lie about it unless he swears to the statement. It is true that a stamped envelope was furnished for a reply; but, aside from this, all expenses, including a notary public's fee, were to be borne by the doctor making the statement. It seems that this is asking a good deal of him—particularly when fine and imprisonment are threatened should he have been mistaken in the diagnosis of a case seen three years previously.

\* \* \*

#### DR. WILLIAM DEBERNIERE MACNIDER

The daily papers announced that on May 31 Dr. William deB. MacNider died in a Durham hospital. Because he so loved life, and got so much from life, it is hard to believe that he is no longer with us in the flesh.

Dr. MacNider began his teaching career at the University of North Carolina while he was still an undergraduate student. This was quite in keeping with his character, for all the rest of his life he continued to be both a teacher and a student. He was almost certainly the most famous medical man that North Carolina ever produced. His research made him an international authority on the kidney. The long list of his achievements in *Who's Who* is evidence of the wide recognition given him at home and abroad. Although he walked with the kings of medicine, however, he never lost the common touch. His capacity for friendship seemed unlimited.

Dr. MacNider was graduated in 1903 from the University medical school during its brief life as a four year school. It is not too much to say that the quality of the work done by him as professor of pharmacology, as well as his constant research, has done much to keep alive in the University two year school of medicine the high standards of medical teaching and research that made possible its expansion into a four year school. His legion of friends rejoice that he lived to see this lifelong dream realized. Nothing better could be wished for the full grown University of North Carolina School of Medicine than that it may retain Bill MacNider's enthusiasm as teacher and as student.

#### De KRUIF AGAIN BEFRIENDS THE DOCTORS

For the second successive month Dr. Paul de Kruif speaks up for the medical profession. In the *Reader's Digest* for June he demolishes the oft-repeated statement that our nation is facing a serious shortage of doctors. He begins by saying that "such incessant propaganda" comes in great part from the Federal Security Agency, and that the American Medical Association is charged as being "the one big obstacle in the path of Congressional efforts to meet that shortage with federal aid to medical education."

Then Dr. de Kruif shows conclusively that we already have more doctors in proportion to population than any other great nation has or ever has had before, and that the proportion is steadily increasing.

This article should be of particular interest to North Carolinians, because almost a column—or one-eighth of the article—is devoted to our own Dr. George Bond of Bat Cave. It should be of interest to all doctors in the country, also, because it exposes the unscrupulous methods used by Oscar Ewing and his crew, in their efforts to get control of medical practice in this country. Thanks are due de Kruif and the *Reader's Digest* for publishing this fair and factual article.

\* \* \*

#### A BOUQUET FOR DR. McMILLAN

The *News and Observer* for May 10 devotes its leading editorial to favorable comment upon Dr. Roscoe McMillan's presidential address, especially the part dealing with the prepaid medical insurance plan for the low income groups. "Nobody in his right mind," quoth the editorial, "can accuse Dr. McMillan of advocating socialized medicine. . . . What he urged was immediate action on the doctor's own statewide plan of voluntary, prepaid medical insurance for low income groups. . . ." The editorial continues:

"It is to be hoped that such wise counsel will be heeded in medical circles in North Carolina.

"Nothing is more apparent in North Carolina and in America at this hour than that if 'socialized medicine' comes it will not be brought by radical politicians but by stubborn and socially unenlightened physicians. More men like Dr. McMillan in the medical profession need to speak out for the profession's determination upon the widest possible and least burdensome ministry of healing for all the people."

## Committees and Organizations

### PROCEDURE FOR COMMITTEE ON GRIEVANCES

By action of the House of Delegates in May, 1950, there was established a permanent Committee on Grievances to consist of the five immediately available past presidents of the Society.

In compliance with the By-Laws there is published herewith in the *North Carolina Medical Journal* the "Rules of Procedure for the Committee on Grievances." These rules are based entirely upon the By-Laws which are rather detailed and specific.

1. The Committee shall be composed of the five most recently available past presidents.

2. The chairman shall be the oldest in point of service, with a vice-chairman and secretary to be selected from members of the Committee.

3. The Committee shall formulate rules of procedure. After approval by the Executive Council and ten days after publication in the *North Carolina Medical Journal*, the rules are to be binding upon all members. In the absence of written notice to the contrary given to the Secretary of the Society by any member, all members of the Society shall be deemed to have consented to these By-Laws.

4. Neither members of the Committee on Grievances nor the Society shall be held responsible by any member of the Society for defamatory or libelous words or statements published by them in good faith and in the performance of their or its duties as members of the Committee on Grievances.

5. Professional conduct shall be determined by the current editions of the "Principles of Medical Ethics of the American Medical Association."

6. The Committee shall:

(a) Supervise ethical deportment of the membership of the Society.

(b) Make recommendations for improvement of professional conduct.

(c) Receive and investigate complaints against any physician prepared in writing and signed by any person, lay or professional.

(d) Advise any members on professional conduct.

7. The Committee shall:

(a) Receive evidence and pass its own judgment upon it.

(b) Attempt to settle complaints ami-

cably, but not assume authority to discipline any physician.

(c) At its discretion, file charges with the Executive Council of unethical conduct against any physician deemed to be guilty.

8. No member of the Committee on Grievances may participate in deliberations nor be present at a hearing concerning the conduct of a physician living within the jurisdiction of the member's County Society.

9. The Committee shall have authority to summons members of the Society to appear before it.

10. During a hearing or the consideration of a complaint no person other than the Committee and the person being heard shall be present. This does not apply to the Attorney of the Medical Society of the State of North Carolina nor those representing either party to a complaint. If a stenographer is necessary, he shall be sworn to secrecy and cannot be a regular employee of the Society.

11. All complaints shall be kept in professional confidence.

12. The Secretary of the Committee shall:

(a) Acknowledge in writing all complaints received in writing.

(b) Shall arrange for meetings as necessary, with the approval of the Chairman.

(c) Shall give advance notice of meeting places and dates to all concerned.

(d) Shall keep the Chairman informed as to the progress of all investigations.

13. The Chairman shall decide whether a complaint should be considered by the entire committee or have a preliminary investigation by one or more members.

14. When the Chairman and one other member are convinced by an informal investigation that no disciplinary action is necessary and when both parties to the complaint agree to accept their recommendations, the matter may be reduced to writing, copies furnished both parties and the file closed.

15. If disciplinary action is thought to be indicated the matter shall be presented to the Committee as a whole.

16. In complaints concerning professional fees the Committee shall determine the amount deemed to be fair and proper. If the member does not accept the amount so determined the matter shall be referred to the Executive Council.

17. The Secretary of the Committee shall have broad powers and discretion in securing



the amicable settlement of complaints, but shall make a report of all cases to the Committee.

18. The Committee may file, over the handwritten signature of all of its members, charges against a member of the Society with either the Board of Censors of a County Society or the Executive Council of the State Society.

19. Findings against a physician who is not a member of the State Society but which do not justify proceedings before the State Board of Medical Examiners shall be reduced to writing and, subject to advice of legal counsel, furnished the physician concerned and the Executive Secretary of the State Society.

20. Both parties to a complaint shall be presented a written statement of the findings of the Committee.

21. Statements concerning non-secret actions taken on ethical deportment may be furnished the *North Carolina Medical Journal* for publication.

22. The Committee shall keep appropriate records of its actions and shall make an annual report and recommendations to the House of Delegates.

23. The Executive Council shall provide funds for the travelling and living expenses of members in fulfilling their duties on the Committee.

24. The Committee shall hold such meetings as may be necessary.

25. The establishment of a Committee on Grievances shall be given full publicity so that the people of the State may be aware of its existence and its functions.

These Rules of Procedure have been approved by the Executive Council.

Paul F. Whitaker, M.D., Chairman  
Oren Moore, M.D., Vice-Chairman  
G. W. Murphy, M.D., Secretary  
William M. Coppridge, M.D.  
James F. Robertson, M.D.

#### COMMITTEE ON PREPAID MEDICAL INSURANCE

The Insurance Committee recommends the adoption of the following resolution by the House of Delegates:

##### RESOLVED,

1. That the Insurance Committee be continued for another year with authority to improve the proposed Operative Schedule of Fees by correcting inequities which have

been pointed out, and to make such alterations in the Subscriber's Certificate and the Physicians Participating Agreement as may be deemed advisable.

2. That the compromise settlement reached by the Hospital Saving Association Board of Trustees and endorsed by the Hospital Care Association Board of Trustees concerning the payment of x-ray-pathology-anesthesia benefits in a combined hospital and professional certificate be approved.

3. That Hospital Care Association and Hospital Saving Association be requested to write a proposed companion hospital certificate or a combined hospital-professional certificate satisfactory to both associations with appropriate co-insurance features necessary to control the cost and to curtail abuse, and to submit such proposed certificate to the Insurance Committee within 90 days for consideration, including proposed rates; and that in event they cannot agree on the terms of such a consolidated certificate, that each association be requested to submit its recommendations for such a certificate which it would issue.

4. That the Insurance Committee be and it is hereby authorized and empowered, subject to the approval of the Executive Council of the Society, either to incorporate a Physicians' Service Company for the purpose of issuing and administering a professional service certificate in accordance with a resolution adopted by the 1950 House of Delegates, or to approve and endorse a similar prepaid medical insurance plan by one or more existing associations or companies, with the provision that the association or company whose plan might be thus approved will follow the recommendations of the committee of this Society with regard to changes to be made in the fee schedule in the light of future experience, and in the settlement of disputed claims for professional fees.

Provided further that the approval or endorsement by this Society or its committee of a prepaid medical service plan issued by any association or company shall not be considered as constituting any restriction of the right and privilege of any individual member of the Society to decline to participate in any plan approved by the Society, or to participate in any prepaid medical service plan handled by and through any other association or company.

### NEWS NOTES FROM THE UNIVERSITY OF NORTH CAROLINA SCHOOL OF MEDICINE

Dr. Nathan A. Womack, professor and head of the Department of Surgery at the University of Iowa, has accepted the position as professor and head of the Department of Surgery at the University of North Carolina School of Medicine, and will come to Chapel Hill in the late summer. Dr. Womack is a native of Reidsville, a graduate of the University of North Carolina and of Washington University School of Medicine. Before assuming the headship of the Department of Surgery at the University of Iowa, he was professor of clinical surgery at Washington University. He is a member of the American Surgical Association, the Society of Clinical Surgeons, the Society of University Surgeons, as well as of many other societies in his special field.

### NEWS NOTES FROM THE BOWMAN GRAY SCHOOL OF MEDICINE OF WAKE FOREST COLLEGE

Dr. Frank Ray Lock, professor of obstetrics and gynecology, has succeeded Dr. C. C. Carpenter as medical director of North Carolina Baptist Hospital. Dr. Carpenter asked to be relieved of this office, which he has held for ten years, in order to devote more of his efforts to his duties as dean of the medical school and professor of pathology. Dr. Lock, who has been with the school since it opened in Winston-Salem, will also be recommended for the post of associate dean.

\* \* \* \*

A class of sixty-one students were candidates for degrees in commencement exercises scheduled for June 10 and 11 when the tenth anniversary of the establishment of the Bowman Gray School was observed. Special tribute was paid at that time to the members of the Gray family who made the school possible through their gifts. Dr. H. W. Tribble, president of Wake Forest College, delivered the commencement address, and Dr. Mark Depp, pastor of Centenary Methodist Church, delivered the baccalaureate sermon. Two M. S. degrees were awarded at that time.

\* \* \* \*

Dr. Parker R. Beamer, professor of microbiology and immunology, received the Moore County Award during the annual meeting of the Medical Society of the State of North Carolina at Pinehurst. The award is made to the author of the best paper presented at the meeting of the preceding year. Dr. Beamer's subject was "Studies on Experimental Leptospirosis (Weil's Disease)."

\* \* \* \*

Dr. Carmillo Artom, professor of biochemistry, and Dr. David Cayer, associate professor of internal medicine, were among the twenty-five investigators who attended the seventh Conference on Liver Injury sponsored by the Josiah P. Macy, Jr., Foundation in New York City on May 20 and 21. Dr. Artom presented a paper on "Mechanism of Action of Lipotropic Factors in Animals and Man," and Dr. Cayer opened discussion on the paper. Dr. C. H. Best of Toronto, Canada, was chairman of the conference.

Dr. C. Hampton Mauzy, associate professor of obstetrics and gynecology, was chosen president-elect of the North Carolina Obstetrical and Gynecological Society at a recent meeting of the society at Mid-Pines.

\* \* \* \*

Dr. Eben Alexander, assistant professor in surgery, prepared an exhibit on "Cerebral Angiography" for the meeting of the State Medical Society.

\* \* \* \*

Dr. Frank R. Lock was elected to membership in the American Gynecological Society at the centennial meeting held in New York City this month.

### BUNCOMBE COUNTY MEDICAL SOCIETY

The following resolution was passed by the Buncombe County Medical Society at its monthly meeting October 16, 1950.

"When a member of this society has earned the respect and admiration of our profession, no less than that of the citizens of this community, and has labored long and faithfully for over forty years; it is seemly that we should—with pride and gratitude—recall his achievements and express our regret that he has left us to return to his native state. Such a man is Paul H. Ringer.

For the sake of the younger men who were not privileged to know him, let it be said that he first came to Asheville to assist the late Dr. Chas. L. Minor, later becoming his associate. Paul Ringer is a gentleman as well as a man of scholarly attainments. It follows that he was an ornament to our profession. Aside from being a student of medicine, he is well read, versatile and an eloquent speaker. Being blessed with equanimity and a keen sense of humor, he has taken fortune's buffets and awards with equal thanks. His ability was not slow in being recognized and rewarded by the profession. He wrote and had published many medical papers—always characterized by erudition and common sense. He was always active in the affairs of this society before which he read and discussed numerous papers. He made his way by the force of his merit. His profession bestowed upon him every office of honor both in this and in the State Society. Later, he became president of the Southern Medical Society, than which there is no greater honor. He fulfilled his duties as a citizen to a rare degree both for his church and for any other worthy cause. Be it resolved by the Buncombe County Medical Society that we deeply regret that he has left us and that we hope that he will find, during the sunset of life, that satisfaction and pleasure which he has so richly earned through years of accomplishment, service and sacrifice."

### PENDER COUNTY MEDICAL SOCIETY

The Pender County Medical Society was recently organized with the following physicians as charter members: Dr. W. I. Taylor, Sr., (honorary), Dr. W. I. Taylor, Jr., Dr. N. C. Wolf, Dr. G. C. Beard, and Dr. A. Henry Dunn. Dr. W. I. Taylor, Sr., was elected president, and Dr. G. C. Beard secretary of the new organization.



## NEWS NOTES

Dr. O. L. Miller, after an absence from his office due to impaired health, has resumed practice with his associates of The Miller Orthopaedic Clinic, 123 West Seventh Street, Charlotte.

Dr. Alexander Webb, Jr., has moved his offices to 221 York Building, Cameron Village, Raleigh. His practice is limited to surgery and gynecology.

## ALPHA EPSILON DELTA CELEBRATES SILVER ANNIVERSARY

Representatives from fifty-four chapters totaling 285 delegates, student members, and chapter faculty advisers assembled for the twenty-fifth anniversary celebration of Alpha Epsilon Delta at the University of Alabama on March 21-24.

Features of the program included a Memorial Service and the Fourth Regional Conference on Pre-medical Education.

At the Convention banquet, held on Thursday evening with Dr. Hugh E. Setterfield presiding, North Carolina Gamma (Wake Forest College), was among the chapters which received awards for their activities during the past three years. The North Carolina Gamma Chapter also won the award for having the largest attendance at the Convention.

The general session of the Fourth Regional Conference on Premedical Education, held on March 23, featured a discussion on "The Educational Problems for the Study of Medicine." Among the speakers was Dr. J. E. Markee, Duke University School of Medicine.

North Carolina had twenty-nine representatives and faculty members from chapters at Davidson College and Wake Forest College at the convention.

## MICHAEL REESE HOSPITAL POSTGRADUATE SCHOOL

The Michael Reese Hospital Postgraduate School is offering a two-week course in "Diseases of the Endocrines—Physiology and Diagnostic Methods," July 9-21, 1951. Dr. Rachmiel Levine, Director, Department of Metabolic and Endocrine Research, is coordinator of the course.

A full-time intensive course in "Hematologic Diagnosis," under the direction of Dr. Karl Singer, will be presented from July 23 to August 4. This two-week course offers a review of the present status of hematology and instruction in actual reading of slides of normal and pathological specimens of peripheral blood and bone marrow. For further information, address: Dr. Samuel Soskin, Dean, 29th Street and Ellis Avenue, Chicago 16, Illinois.

## AMERICAN HEARING SOCIETY

Miss Margaret Alice Fraser of Upper Darby, Pennsylvania, has been named winner of the 1951 Kenfield Memorial Scholarship, according to an announcement by Miss Rose Feilbach, chairman of the Teachers' Committee, the American Hearing Society, Washington, D. C.

The award, made annually by the Society, entitles the successful applicant to take a teachers' training course in lip-reading from any normal training teacher, school or university in the United States offering a course acceptable to the Teachers' Committee.

## ARTHRITIS AND RHEUMATISM FOUNDATION

The Arthritis and Rheumatism Foundation is offering research fellowships in the basic sciences related to arthritis. Fellowships will be granted at both the predoctoral and postdoctoral levels. The predoctoral fellowships will range between \$1,500 and \$3,000 per annum, and the postdoctoral from \$3,000 to \$6,000. The deadline for these applications is November 15, 1951. Application forms may be obtained by writing the Medical Director, Arthritis and Rheumatism Foundation, 535 Fifth Avenue, New York 17, N. Y.

## NATIONAL GASTROENTEROLOGICAL ASSOCIATION

The National Gastroenterological Association has announced that its course in postgraduate gastroenterology will be given at the Drake in Chicago, Illinois, on September 20, 21, and 22.

This year the course will again be under the direction and co-chairmanship of Dr. Owen H. Wangenstein, professor of surgery of the University of Minnesota Medical School, who will serve as surgical co-ordinator, and Dr. I. Snapper, director of medical education at Mt. Sinai Hospital, New York, who will serve as medical co-ordinator.

Drs. Wangenstein and Snapper will be assisted by a distinguished faculty selected from the medical schools in and around Chicago, whose presentations will cover diseases of the mouth, diseases of the esophagus, peptic ulcer diseases of the stomach, disease of the pancreas, cholecystic disease, psychosomatic aspects of gastrointestinal disease, diseases of the liver, diseases of the colon and rectum, and other miscellaneous subjects including pathology and physiology, radiology, gastroscopy, and others.

For further information and enrollment write to the National Gastroenterological Association, Department GSJ, 1819 Broadway, New York 23, New York.

## AMERICAN HEART ASSOCIATION

The twenty-seventh Annual Meeting and the twenty-fourth Scientific Sessions of the American Heart Association were held in Atlantic City, New Jersey, from June 6 to June 10, 1951.

Chairmen of each of the four scientific sessions included Dr. Howard B. Sprague, Boston, president of the American Heart Association; Dr. E. Cowles Andrus, Baltimore, chairman, Program Committee; Dr. T. Duckett Jones, chairman, American Council on Rheumatic Fever; and Dr. A. C. Corcoran, Cleveland, a member of the Section on Circulation of the Scientific Council.

Dr. Carl Voyles, Jr., and Dr. Edward S. Orgain of Durham, North Carolina, presented a paper on "Resin Therapy In Chronic Congestive Failure" at the Fourth Session.

## YESHIVA UNIVERSITY MEDICAL SCHOOL

On December 15, 1950, New York State's Board of Regents, amended the Charter of Yeshiva University empowering it to open a medical and dental school. This marked the first such move by the Regents in 114 years for a medical school charter.

In seeking to establish a medical school, Dr. Samuel Belkin, president of the university, explained that Yeshiva University is anxious to render service to our nation and, especially, to solidify Jewish con-

tributions to American higher and professional education. As the first American university under Jewish auspices, "Yeshiva University is deeply concerned in blazing a trail of its own in the field of higher education in conformity with the great American democratic traditions of education and in harmony with the spiritual heritage of Judaism," Dr. Belkin said.

#### AMERICAN COLLEGE OF SURGEONS

The American Foundation of Occupational Health has taken over on May 1 the evaluation and approval of medical services in industry which has been conducted by the American College of Surgeons for the past twenty years, according to Dr. Paul R. Hawley, Chicago, director of the College. The Foundation is setting up a board of governors to guide them in the new project. On this board will be three representatives each from the Industrial Medical Association (formerly the American Association of Industrial Physicians and Surgeons) and from the donors to the project; two each from outstanding business executives; and one each from the American College of Surgeons, the American College of Physicians, the American Medical Association, the American Academy of Occupational Medicine, the Association of American Medical Colleges, the Association of American Schools of Public Health, and the Industrial Hygiene Foundation.

\* \* \*

The American College of Surgeons will hold its thirty-seventh annual Clinical Congress in San Francisco, November 5 to 9, 1951, with headquarters at the Fairmont Hotel and Civic Auditorium. The thirtieth annual Hospital Standardization Conference is scheduled to be held concurrently, with meetings in the Civic Auditorium, as a part of the Congress. The combined programs will include scientific and technical exhibits, color television, cine clinics, medical motion pictures, scientific sessions, panel discussions, conferences, symposia, official meetings and forums. Several thousand surgeons and hospital representatives are expected to attend.

(BULLETIN BOARD CONTINUED ON PAGE 251)

### Classified Advertisement

#### OFFICE SPACE—CHAPEL HILL, N. C.

Excellent opportunity for General Practice and/or Pediatrician.

Ground Floor, Close in.

Contact: James R. Farlow

Attorney at Law

Phone 5126

#### FOR SALE

Doctor's complete equipment for general practice—microscope, centrifuge, baumano-meter, steel folding examination table, haemacytometer, urethral sounds, dental forceps, 75 items, \$1,000 value. Sell half price.

BOX X THIS JOURNAL  
300 Hawthorne Road  
Winston-Salem, N. C.

## AUXILIARY

### PRESIDENT'S LETTER

#### In Appreciation!

It was a good year, thanks to all of you who worked so hard and made it possible. Your reports were wonderful. They showed real awareness of the important things, not only awareness, but willingness to do something about them, which is so vital!

You have made my year as president one of the richest in my life. Names have become faces, and faces have become those of friends I shall always cherish. I am truly grateful to you for the many privileges you have given me.

Your new president, Mrs. B. Watson Roberts, Durham, has things well organized, and is full of enthusiasm and new ideas. I know the coming year will be an outstanding one as you work with her with the same zeal you worked with me last year.

May your lives be greatly enriched as you give your services so freely to worth-while things.

Sincerely,

Louise Johnson (Mrs. Harry L.)  
President

\* \* \*

### REVISIONS

We should like you to study the following revisions and be ready to vote upon them at the Fall Board Meeting.

#### STUDENT LOAN FUND:

Article II, Section 2: Change to read:  
The loan shall be limited to \$500.00 a year for two years to any one individual.

It was further suggested that the incoming president appoint a committee to revise Article III, Section 2 (membership and dues) of the By-Laws concerning honorary members. The following report was given by the revisions chairman, Mrs. John T. Saunders, Asheville. We should like you to give it your careful consideration. It will also be discussed at the Fall Board Meeting.

\* \* \*

### REPORT OF THE REVISIONS COMMITTEE

Our Auxiliary is now 28 years old. During this time we have made no provisions for honorary members. We have been busy seeking new members and making a good state organization. While there are some members



## A Further Report to Members of the Medical Society of the State of North Carolina

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Our announcement increasing the limits of our Accident and Health policies in the Medical Society Group from \$50.00 per week to \$75.00 per week, (\$325.00 per month), has had remarkable response. Several hundred have applied for the increase up to the limit.

If you are under age 60, and overlooked applying for the increase during the period from April 8th to June 8th, please write me promptly, and I will do the best I can for you.

**If you are not insured under your Society Group, now is the time to apply.**

**\$75.00 per week (\$325.00 per month)  
for loss of time from practice**

**\$5,000.00 for accidental death or dis-  
memberment including speech and hearing**

**Annual premium only \$116.00  
Semi-Annual premium \$58.00**

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NEWARK, NEW JERSEY**

whom we have honored for a long time, we have not officially made them honorary members.

According to the Constitution and By-laws of the Medical Society there are two classes of honorary members: "Those who have won distinction by their contributions to medical science, and elderly physicians who, prior to their retirement, have displayed a proper interest in the welfare of the Society; and 'honorary fellows,' those who have been Fellows continuously for thirty years."

The Auxiliary, while patterned after the Medical Society, is different. In our organization membership is voluntary, but once in a county organization, members must pay dues to the State and National Auxiliaries as well as to the local organization.

Age makes a difference. Now that we have passed the quarter century mark we must revise or add to our Constitution to provide for members we wish to honor. First, this committee believes that honoring a member should be an honor for her, not because her husband is an honorary member of his society. Second, since our organization is in its infancy and many members who should be honored are still among our most enthusiastic and interested members, they should not be deprived of their vote or ability to hold office.

To most of us, paying dues once a year is a minor problem, but an honorary member should be free from dues.

At this time the Committee would like to present the following three Revisions to be voted upon. According to the Constitution and By-laws these Revisions can be voted upon, though no member can be voted into honorary membership until after confirmation at the Fall Board Meeting.

1. State Auxiliary: (a) At any regular meeting of the State Auxiliary a member may be voted to honorary membership by a majority vote, providing the name has been presented and passed upon at the Fall Board Meeting. To be nominated a member must have won distinction in the display of interest and in the welfare of the Auxiliary. She should be exempt from dues and shall be entitled to all the privileges of the Auxiliary. The State Society shall assume the responsibility of paying National dues for such a member.

(b) Any member who has been a member

of the Auxiliary continuously for 30 years and whose dues have been paid during that time shall be an honorary member and shall be entitled to all the privileges of the Auxiliary. She shall be exempt from all dues and fines and her State and National dues shall be paid by the State Auxiliary.

2. County Auxiliaries may at any time, by unanimous vote, elect honorary members. Such members shall be exempt from all dues and fines and shall be entitled to all the privileges extended other members. The County Auxiliary shall assume the responsibility of paying dues, State and National, for such members.

3. Widows: At the death of a doctor in good standing his widow may continue to enjoy the privileges of the Auxiliary, providing she continues to pay dues and fines according to her local auxiliary by-laws. She may vote, hold office and represent the Auxiliary on any occasion. At such time as she may be voted honorary membership or completes 30 years continuous membership, as provided in Section 1, she becomes an honorary member. She continues to enjoy the same privileges accorded other members.

Thelma Saunders (Mrs. John T.)  
Revisions Chairman

\* \* \*

## In Memoriam

### Mrs. William Todd Ferneyhough

We, the members of the Auxiliary to the Rockingham County Medical Society, wish to express our deep sense of loss in the passing of one of our most beloved members, Mrs. W. T. Ferneyhough, and to pay tribute to her memory as our dear friend and loyal co-worker.

She was quiet, sincere, unassuming and gentle in disposition, and was devoted to every interest of her church, her loved ones, and her friends. Her strong Christian character and her life of splendid loving service challenge us to follow in her footsteps, and inspire us to live better, more useful lives of devotion to our society, our church, and our Heavenly Father.

Our sympathy and love go out to her family and her many friends.

Therefore, be it resolved that in appreciation of her consecrated life of devoted service this tribute of love and respect be entered in the records of this society and that a copy be sent to the *North Carolina Medical Journal* and to the family.

Mrs. G. P. Dillard  
Mrs. Carl V. Tyner  
Mrs. John B. Ray



**Diabetes Mellitus: Principles and Treatment.** By Garfield G. Duncan, M.D., Clinical Professor of Medicine, Jefferson Medical College; Director of Medical Division, Pennsylvania Hospital, and the Benjamin Franklin Clinic, Philadelphia. 289 pages with 31 figures and 40 tables. Price, \$5.75. Philadelphia and London: W. B. Saunders Company, 1951.

A sort of editorial preview of this book was given in the April issue of this journal, in a discussion of the Greensboro Academy of Medicine Symposium. Many who heard Dr. Duncan's talk on diabetes were heard to say that they expected to buy a copy of this book when it was published. They will not be disappointed, for the book is written just as he talked.

In the preface, Dr. Duncan states his two objectives in preparing this volume: "first to bring together and correlate up-to-date principles and the understanding of and in the treatment for diabetes mellitus and, second, to deal with this disease and its complications in such a manner that physicians and students may find herein a practicable and simplified outline of therapy." He has succeeded admirably in attaining his goal. The book brings up to date the accumulated knowledge of diabetes and its complications, and makes treatment simpler and more understandable than any other book this reviewer has yet seen. It can be recommended unreservedly to students and practitioners.

**Handbook of Pediatric Medical Emergencies.** By Adolph G. DeSanctis, M.D. and Charles Varga, M.D. 284 pages. Price, \$5.00. St. Louis: The C. V. Mosby Company, 1951

This handbook may well find its place as a handy reference for the practicing pediatrician and the general practitioner who handles pediatric emergencies.

With such a diversity of topics to be considered, it is possible many of the methods of treatment advised in this text may be different from those used in other institutions. However, those methods of therapy advised are standard in many places, and a short bibliography follows each chapter so that more detailed information can be obtained. There also is a section on pediatric procedures which will be of most value to house officers.

The appendix contains a complete list of commercial products which are sources of poisons, and also a list of poisons contained in common household articles.

In general, this book should be of value to those concerned with the emergency treatment of children. It is well bound, printed on good paper, and contains adequate illustrations and tables.

**Letters of Jean de Carro to Alexandre Marcet, 1794-1817.** Edited with an Introduction and Notes by Henry E. Sigerist. Supplement No. 12 to the Bulletin of the History of Medicine. 78 pages. Price, \$2.00. Baltimore: Johns Hopkins University Press.

These twenty-two letters are in the Henry Barton Jacobs Collection of the William H. Welch Medical Library of the Johns Hopkins University.

Jean de Carro of Geneva and, after the French Revolution, of Vienna, a friend of Edward Jenner, received a string impregnated with vaccine virus

from Pearson of England, and with it introduced vaccination into continental Europe.

Alexandre Marcet, also born in Geneva, graduated in medicine, as did De Carro, from the University of Edinburgh. He became a resident of Vienna after a political upheaval in the Republic of Geneva.

De Carro took up, in addition to vaccination, the sulfur cabinet fumigation of certain skin diseases and the iodine treatment of goiter.

The first and third letters of the series are in English, the rest in French.

The first letter deals with medical student life in Edinburgh, the curriculum, the vices of the time, and so on.

The second seeks aid in procuring a tutor for the son of a prominent man.

The third deals with Marcet's escape from the politically disturbed Republic of Geneva after he had suffered imprisonment.

The fourth letter is largely personal.

The next four letters discuss vaccination, politics, and prolonged serious illness of De Carro's wife. The ninth letter tells of her death from phthisis.

The tenth letter discusses vaccination further. The next two are personal.

The thirteenth letter, a long one, deals with various scientific matters, including Marcet's proposal of De Carro for corresponding membership in the Medical Society of London. The fourteenth letter refers in detail to Jenner and his work, and to De Carro's election to membership in the Jennerian Society.

The fifteenth letter refers to Benjamin Waterhouse of Cambridge, Massachusetts, who introduced vaccination to North America.

The sixteenth letter deals with many things and inquires if Jenner had published in any medical journal a letter from "la Compagnie des Indes" (It is not clear whether this means the British East India Company or a French Company—perhaps the latter, for France had some territory in India) about 200 guineas sent by the company, apparently, to De Carro for the purchase of a piece of plate.

The seventh letter continues the discussion of vaccination.

The eighteenth describes his three sons and his daughter, especially the military service of his sons.

The nineteenth refers to medicine in London, Geneva, and Vienna, especially the treatment of "venereal chancre."

The twentieth refers to his second son, then in Odessa, and to De Carro's friend, Richard Bright.

The twenty-first discusses personal matters and Austrian hospitals.

In the last letter, a brief one that is largely personal, De Carro acknowledges his great interest in Marcet's book on bladder stone, offering to translate it into French and German. De Carro's closing farewell is "with all my heart and soul."

An appendix gives a brief discussion by De Carro of Joseph and Johan Peter Frank.

This publication is of real significance to the student of medical history, as it deals with many little known personalities and matters of prime importance in European medicine at the end of the eighteenth and beginning of the nineteenth centuries. The letters in English show De Carro to have been a master of that language but the reviewer feels fortunate to be able to read and appreciate those in French, for the best of translations cannot match the sparkle and clarity of the originals.

**Functional Anatomy of the Limbs and Back.**

A Textbook for Students of Physical Therapy and Others Interested in the Locomotor Apparatus. By W. Henry Hollinshead, A.B., M.S., Ph.D., Head of the section on Anatomy, Mayo Clinic, Rochester; Professor of Anatomy, Mayo Foundation, University of Minnesota. 341 pages with 112 illustrations. Price, \$6.00. Philadelphia and London: W. B. Saunders Company, 1951.

This book is an excellent textbook for introducing the student of physical therapy to functional anatomy. It also provides good reference material for students of physical education and nursing. It is simply written, so that even the student who has not had good courses in anatomy in nursing school or college will have little difficulty mastering the anatomical terms. The print is readable, and the diagrams are excellent and numerous. The text is brief and to the point, but at the same time gives the essential facts clearly and attractively.

**Functional Anatomy of the Limbs and Back** is not limited to the limbs and back only, but devotes about sixty pages to "Anatomical Terminology," "Tissues of the Body," and "Organs and Organ Systems." The author, in Section 1, under the general caption of "The Organization of the Body," gives the reader and the student groundwork for the specialized information that comprises the bulk of the book. This material, collected and condensed from various sources, is essential for the student of physical therapy; of course it as well as the material kinesiology will need to be supplemented later on with other texts, but it should make the more complicated texts easier to follow.

The sections on "The Limbs and Back" are not only valuable to the physical therapy student, but important also as a reference book for graduates in physical therapy and medicine. In these sections Dr. Hollinshead describes the bones, joints, muscles, their origins and insertions, nerve supply, blood supply, and muscle actions; and presents clear diagrams of all the major muscles of the limbs, back, neck and trunk.

Altogether, this is an excellent book for physical therapists and all others who work with patients whose locomotor apparatus has been impaired.

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**Symposium on Steroids In Experimental-Clinical Practice.** Edited by Abraham White, M.D., University of California Medical Center. 415 pages, with 103 figures and 104 tables. Price, \$7.50. Philadelphia: The Blakiston Company, 1951.

The most recent information on the use of the 11-desoxy steroids in experimental and clinical practice is contained in this book which has just been released to the medical profession.

It is a complete report of the scientific papers and discussions presented at the First Annual Steroid Conference held in Cuernavaca, Mexico, in January, 1951.

It contains twenty-two reports by sixty-two prominent hormone specialists and rheumatologists on their work in both animal and clinical studies with pregnenolone and other synthetic steroid hormones of the 11-desoxy group in arthritis, cancer, sterility

caused by seminal inadequacy, tuberculosis, ulcers, high blood pressure, and other diseases. Although the reports are concerned mainly with the 11-desoxy steroids, information of value is also given with reference to cortisone and ACTH, generally for comparative purposes.

The report presented by Dr. W. Paul Holbrook of the Southwestern Clinic and Research Institute, Tucson, Arizona, on clinical trials with various 11-desoxy steroids in rheumatoid arthritis indicates the possible adjuvant use of such steroids together with subtherapeutic doses of cortisone and ACTH. This approach has the important feature of suggesting a means of avoiding the undesirable side effects of long term administration of clinically effective doses of cortisone and ACTH.

Users of pregnenolone, which has been extensively studied especially for its use in arthritis, reported that in animals, it exerts influence ranging from spermatogenic to antifibromatogenic. In clinical practice, it was reported that the compound is effective mainly in the mild or early stages of arthritis and in rheumatism conditions involving the soft tissue, such as bursitis or fibrositis.

Several chapters deal with the newer experiences in the clinical application of steroids in various forms of cancer. The work of Dr. Roy Hertz of the National Cancer Institute in Bethesda, Maryland, in cervical cancer, and the work of Dr. George C. Escher of the Memorial Center for Cancer and Allied Diseases in New York, in mammary cancer indicates that in some instances regressive changes were observed. However, they did not consider such changes to be sufficient to indicate the use of the newer compounds as therapeutic agents. The overall report of Dr. Ira T. Nathanson of the Harvard Medical School on the present day status of androgens presents an important summary of the factors involved in the search for new steroids in the treatment of neoplastic diseases.

In addition to the papers and discussions, the book contains tables which summarize the clinical studies and help the reader formulate an opinion regarding the present and future status of the 11-desoxy steroids in clinical practice. These tables give for each steroid studied, information on the type of clinical condition, the number of patients, the pharmaceutical form of preparation used, the average daily dose, the duration of the treatment, and the actual clinical responses observed.

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**Lilly's to Process Blood Plasma**

Because stock-piling of human blood plasma for military or civilian disaster is considered an essential defense measure, Eli Lilly and Company has announced plans to establish a modern blood-processing unit. Over 2,000,000 pints of blood were processed and supplied at cost by the Lilly company during World War II. The new unit, to be set up and operated in Indianapolis for the Armed Services Medical Procurement Agency of the United States, will be completed late this year.

Whole blood collected in principal Midwestern cities by the Red Cross will be expressed to the Lilly plant in refrigerated containers. Almost immediately after the whole blood arrives, processing starts with the centrifugation of plasma from the cells. The plasma is drawn off, pooled, and irradiated with ultraviolet light. The latter step has been added since World War II and is designed to inactivate the virus responsible for hepatitis. The plasma is



## BULLETIN BOARD

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### CITIZENS COMMITTEE FOR THE HOOVER REPORT

Dr. Robert Collier Page, chairman of the National Doctors' Committee for Improved Federal Medical Services, recently announced the completion of an advisory committee of experts from every branch of the medical profession. They will consult with the chairman on matters of policy in the pending campaign to secure wide economies and more efficiency in the present overlapping and competing system of hospital and medical care operated by the government.

The National Doctors' Committee is an affiliate of the Citizens Committee for the Hoover Report, which is urging passage of the recommendations of the bipartisan Hoover Commission for the unification of the various governmental medical agencies under a single authority. The slogan of the Doctors Committee is "Not more government in medicine but better medicine in government."

Dr. George D. Wilson of Asheville, North Carolina, is a member of the newly formed advisory committee, which includes high-ranking men in the twenty major divisions of medicine and surgery and the allied technical skills.

### PAN-PACIFIC SURGICAL ASSOCIATION

F. J. Pinkerton, president of the Pan-Pacific Surgical Association, reports that plans are well under way for the Association's Fifth Congress and advises doctors to make arrangements as soon as possible to attend this meeting.

Dates for the Honolulu congress are November 7-19, 1951. The scientific program, which will begin on November 12 and continue through November 16, will include sessions in all divisions of surgery, with papers presented by surgeons from the Pacific area countries.

The Pan-Pacific Surgical Association has been officially appointed as travel agent for those attending the congress, and it is therefore important that all hotel and travel reservations be made through the Association office, Suite 7, Young Hotel Building, Honolulu, Hawaii.

### DEPARTMENT OF THE DEFENSE

The first kinephoto recording of surgery for medical training purposes has been made and demonstrated at the Army Medical Center, Washington, D. C., the Department of the Army has announced.

Kinephoto recordings—simultaneous recording of sound and picture—of an amputation and other orthopedic procedures were made by the Radio Corporation of America, of Camden, New Jersey, during a medical service course for company grade officers at the Army Medical Center.

Being considered as a method of producing medical training films for wide distribution, the kinephoto process, according to RCA engineers, offers these major advantages over the training films now used. Surgery can be shown in greater detail because of lower light level requirements; questions and answers between surgeons and observing students can be recorded for distribution with the film, and greater ease of reproduction is achieved with a sharp reduction in recording noise.

### Remedies for Seasickness Tested by Armed Forces

The Armed Forces haven't given up on the old bugaboo of sailor and airman alike—motion sickness.

With the cooperation of the Navy's Military Sea Transportation Service in the Atlantic, medical men from three military services have embarked on a series of controlled experiments with troops at sea. They hope to find out how to relieve the dread and familiar symptoms of seasickness—the churning stomach, the pale and perspiring brow, and the tendency toward utter despair.

Preliminary studies have been made, the Navy reveals, in an attempt to determine which of several proposed remedies works best.

The drug, dramamine, developed under Army supervision, was found in earlier tests to be 97 per cent effective in both the prevention and cure of seasickness. Later experiments by the Air Force established that Benadryl, hyoscine and Artane were as effective as dramamine in curing seasickness. None of the drugs, however, have so far been found to be both safe and effective for air sickness.

\* \* \*

### American Medical and Hospital Associations Support Army Nurse Recruitment Goal

The American Medical Association and the American Hospital Association have endorsed the expansion goal of 3,000 additional nurses for the Army Nurse Corps, Major General Raymond W. Bliss, the Army's Surgeon General, announced today.

Dr. George F. Lull, secretary and general manager of the American Medical Association, has advised that its Board of Trustees approve the nurse recruitment program and will bring it to the attention of the medical profession through the *Journal of the American Medical Association*.

\* \* \*

### Dr. W. Randolph Lovelace, II, Heads Armed Forces Medical Policy Council

Appointment of Dr. W. Randolph Lovelace, II, as Chairman of the Armed Forces Medical Policy Council, effective July 1, 1951, has been announced by the Secretary of Defense, General Marshall.

Dr. Lovelace, who is a member of the Council, succeeds Dr. Richard L. Meiling, whose resignation as chairman becomes effective on June 30, 1951.

Dr. Lovelace is a diplomate of the American Board of Surgery; a fellow of the American College of Surgeons, the International College of Surgeons, the Institute of Aeronautical Sciences, and the Aero Medical Association of Military Surgeons and many other medical associations.

\* \* \*

### Civilian Consultants Aid Army Medical Program

Three prominent civilian physicians have accepted appointments to committees of the Society of United States Medical Consultants in World War II, which will assist in providing medical consultation of the highest order to the Army Medical Service, both in the United States and overseas. The committees were appointed at a meeting of the society's advisory board in the office of Major General R. W. Bliss, Army Surgeon General, recently.

Heading the committee, which will concentrate on advising on assignment of consultants for Army hospitals in the United States, is Dr. Joseph M. Hayman, Jr., specialist in internal medicine, of Cleveland, Ohio. The overseas committee chairman is Dr. Alfred R. Shands, orthopedic surgeon of Wilmington, Delaware. The only other doctor so far appointed is Dr. John B. Flick, of Philadelphia,

Pennsylvania, who will fill the general surgery position on the overseas committee.

Still to be named are a neuropsychiatrist and a general surgeon for the Zone of Interior committee, and an internist and a neuropsychiatrist for the overseas committee.

The aim of the Zone of Interior committee will be to assure that every Army hospital in the United States will have available within a reasonable distance consultant skills which can be called upon as needed. Under the overseas program, outstanding American physicians are sent abroad to visit the European and Far East Commands and the Panama Canal Zone as representatives of the Surgeon General.

\* \* \*

#### Consultants to Army Surgeon General to Inspect Installations in Europe

Three of America's widely known medical specialists who will be in Europe this summer have volunteered to inspect Army Medical Service installations in the European Command as consultants to the Army Surgeon General, it was announced today.

Dr. Paul Magnuson, Chicago, Illinois, professor of orthopedic surgery at Northwestern University and until recently medical director of the Veterans Administration, and Dr. Rex Diveley, chief of orthopedic surgery at Kansas City (Missouri) Hospital, plan to visit orthopedic cases and to check on orthopedic service in Army hospitals.

Dr. Paul Titus, Pittsburgh, Pennsylvania, secretary and treasurer of the American Board of Obstetrics and Gynecology, will confer with Army officers on duty at various hospitals.

\* \* \*

#### Young Physicians Must Plan Tour of Army Duty

Young physicians must plan to serve at least one tour of active duty in the Army Forces as their contribution to the battle against communism, Brigadier General Paul I. Robinson, chief of the Army Surgeon General's personnel division, stated recently in an address before the Oklahoma State Medical Association at Tulsa, Oklahoma.

He warned that the back-log of volunteer physicians has been exhausted and that new personnel must be obtained at an increased rate, either through additional volunteers or inductions by selective service. Pointing out that the maintenance of high professional standards in the selection of personnel is paying dividends in saving lives that otherwise would have been lost, General Robinson paid tribute to the young officers now on duty in Korea, who, he said, have played an important role in establishing a new record low death rate.

In explaining one of the principal advances in personnel use since World War II, General Robinson said, "A recent survey shows that nonprofessional work has been cut to a minimum in all theatres of operation, leaving more time for the young medical officer to improve his qualifications and abilities in whatever field of medicine he chooses."

\* \* \*

#### Army's Need for Women Specialists Double that of Two Months Ago

To meet the Army's anticipated expansion, the Army Medical Service hopes to recruit 572 volunteer women medical specialists by June 30, the Department of the Army has announced.

Brigadier General Paul I. Robinson, chief of the

Surgeon General's personnel division, said that this is more than double the anticipated need announced last November.

The 572 volunteers needed by June 30 include 247 dietitians, 179 physical therapists, and 146 occupational therapists, Colonel Vogel said. She expressed confidence that these specialists could be obtained through the cooperation of the civilian professional societies with the Army Medical Service.

#### SOCIAL SECURITY AGENCY

##### Announcement of Regular Corps Examination for Medical Officers

A competitive examination for appointment of Medical Officers in the Regular Corps of the United States Public Health Service will be held on September 4, 5, and 6, 1951. Examinations will be held at a number of points throughout the United States, located as centrally as possible in relation to the homes of candidates. Applications must be received no later than August 6, 1951.

The Regular Corps is a commissioned officer corps composed of members of various medical and scientific professions, appointed in appropriate categories such as medicine, dentistry, nursing, engineering, pharmacy, etc.

Appointments will be made in the grades of Assistant Surgeon (equivalent to Navy rank of Lieutenant (j.g.) and Senior Assistant Surgeon (equivalent to Lieutenant). In making assignments, consideration is given to the officer's preference, ability, and experience; however, all commissioned officers are subject to change of station and assignment as necessitated by the needs of the Service. Appointments are permanent in nature and provide opportunities to qualified physicians for a life career in clinical medicine, research, and public health. Applicants who successfully complete this examination may ordinarily expect appointment as soon as they become eligible.

Requirements: Both grades: United States citizenship, at least 21 years of age, and graduation from a recognized school of medicine. Assistant Surgeon: At least seven years of educational training and professional experience subsequent to high school. Senior Assistant Surgeon: At least ten years of educational training and professional experience subsequent to high school.

Applicants who will complete these requirements within nine months of the date of the written examination will be admitted, but may not be appointed until they meet the above requirements. Physicians who are successful in the examination and are now serving internships will not be placed on active duty in the Regular Corps until completion of internship. The examination will include an oral interview, physical examination, and written objective tests covering the professional field.

Application forms and additional information may be obtained by writing to the Surgeon General, United States Public Health Service, Federal Security Agency, Washington 25, D. C. Attention: Division of Commissioned Officers.

\* \* \*

The annual report of disease outbreaks traceable to water, milk and milk products, and other foods, released recently by the Public Health Service of the Federal Security Agency, shows an increase of 951 cases of waterborne infections in 1949 over 1948, and a decrease of 367 cases caused by milk and milk products. Three persons died in 1949 from drinking tainted water, a decrease of one over 1948.



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## ALLERGIC PROBLEMS DEMANDING PROMPT TREATMENT

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RICHMOND, VIRGINIA

The various manifestations of allergy are being increasingly recognized, and are believed to play some part in approximately 50 per cent of the cases seen in medical practice. Ten per cent of these hypersensitive individuals require specific treatment for their allergic condition. This discussion will be limited to that group of patients whose symptoms are acute and demand prompt treatment. Some of these cases may be termed medical emergencies.

Among the problems to be discussed are acute bronchial asthma, urticaria, angio-neurotic edema, allergic dermatoses of various types, and reactions following medical investigation and treatment. Some of these patients exhibit a definite state of shock.

### *Diagnosis*

In these acute cases, the type of problem or reaction involved must be recognized when the patient is first seen, and the physician must rule out non-allergic entities which may present symptoms generally recognized as allergic in origin.

A constitutional reaction, such as that which follows an overdose of pollen extract, may involve several organs at one time. There may be bronchial asthma, edema of the nasal mucous membrane, generalized urticaria, gastrointestinal distress (nausea, vomiting, diarrhea and cramps), and cerebral symptoms or even unconsciousness.

Prompt treatment is mandatory in those allergic patients having acute gastrointestinal symptoms. In such cases one must exclude acute appendicitis, particularly when there is a history of similar attacks.

Symptoms of bronchial asthma must be differentiated from those symptoms caused by bronchial obstruction or a foreign body in the trachea or bronchus. Convulsions, fainting spells, and severe headaches which are not of the migraine variety must be separated from true migraine. Reactions following the ingestion, insufflation, instillation, or application of a drug to which the patient is allergic must be distinguished from gastrointestinal allergy, allergic dermatoses, or other allergic manifestations. The flare-up of a sinus infection must be differentiated from allergic rhinitis. One must consider non-allergic conditions involving the central nervous system before diagnosing an allergic reaction in the brain.

### *Etiologic Factors*

#### *Medical treatments*

Among the many causes which may precipitate an allergic emergency are medical treatments of various types. Acute reactions following such treatments may be immediate or delayed.

Immediate reactions are frequently seen in the highly sensitized individual after nasal medication with various astringents, including cocaine and ephedrine-like vasoconstrictors. Such reactions may be characterized by a profuse rhinorrhea, marked congestion, and edema of the entire mucous membrane of the nostrils, postnasal drip, a secondary pressure or vacuum headache, and sometimes involvement of the mucous membrane of the eyes. Constitutional reactions with accompanying shock frequently follow intravenous pyelograms and the instillation of medicines or dyes into the urethra or bladder. The oral administration of drugs may produce acute angioneurotic edema of the glottis and the adjacent mucous membranes following actual

contact of these membranes with the drugs.

Thomas and Fenton<sup>(1)</sup> have reported several cases of drug reaction, including three deaths, following the use of Pontocaine. Four reactions occurred in patients who were being prepared for bronchoscopic examination, and three followed local use of the drug before gastroscopic examination.

Reactions following the intravenous administration of drugs are of varying intensity. They may be encountered in apparently normal individuals with no history of drug allergy, or in patients who are receiving emergency treatment for status asthmaticus with such drugs as aminophylline, intravenous procaine, or intravenous Demerol.

Serum sickness is an allergic reaction to the parenteral administration of foreign serum. Usually this condition is characterized by an incubation period, skin eruption, edema, polyarthritides, and enlargement of the glands. Severe asthma is sometimes secondary to serum sickness. There are three types of serum sickness:

1. *The immediate explosive reaction*, which usually occurs when the serum is reinjected after the usual incubation, within four months following the initial injection.

2. *The accelerated reaction* which immediately follows a reinjection.

3. *Serum atopy*, which is seen in patients who have received no prior serum but who are sensitive to horse dander. Careful testing is necessary to avoid severe constitutional reactions from the administration of serum, and to protect the patient from a generally recognized cause of unnecessary deaths<sup>(2)</sup>. If scratch or conjunctival tests are used, they should be carried out before any skin tests are performed. If evidences of hypersensitivity are found, the tests should be followed by desensitizing doses of serum.

One may observe delayed reactions from hyposensitization treatments with inhalants, molds, bacterial vaccines, or fungous extracts. These reactions appear within twelve to forty-eight hours after injection and may produce symptoms involving one or more shock tissues.

#### *Sensitization studies*

Various types of reactions can follow skin testing. It is the opinion of most allergists that scratch tests should precede intradermal tests. When skin testing is done in highly sensitized individuals—especially those having a dermatologic allergy, patients ill at the

time of testing, and young children—it is well to keep in mind the advantages of using passive transfer tests.

Certain acutely sensitized individuals, especially those with multiple pollen sensitivities, may have a constitutional reaction following scratch tests with pollens. Such reactions sometimes follow scratch tests with certain highly allergenic foods, such as cottonseed, nuts, buckwheat, and sea foods. Occasionally a patient who exhibits a negative scratch test will have a generalized reaction following intracutaneous testing with the same material. Waldbott<sup>(3)</sup> has reported this occurrence, and I have observed it many times.

Another kind of reaction, which may be of the immediate type, sometimes follows intracutaneous or endermic testing. It is characterized by angioneurotic edema, urticaria, marked nasal congestion and asthma.

A third type of reaction is seen following patch tests in patients with a localized dermatitis who are acutely sensitive to the particular material being tested. A generalized constitutional reaction can follow patch-testing in such a case.

Ophthalmic or conjunctival tests are sometimes employed to test a patient's sensitivity to pollens or to immune serum—especially horse serum, such as tetanus antitoxin. These tests may produce a marked localized reaction with a severe edema of the conjunctivae, giving the appearance of a gelatinous mass about the limbus, and even suggesting exophthalmos; there may also be edema of the tissues adjacent to the eyes. In addition to this localized response, more generalized reactions, such as hay fever and bronchial asthma, may occur.

#### *Allergens in the patient's own environment*

Severe constitutional reactions are sometimes seen in patients who have encountered certain allergenic materials in their environment. A typical example is that of the little boy who had a severe constitutional reaction, with asthma and cyanosis, after playing around the abelia bushes in his yard and getting some of the pollen in his eye. Although there was no previous history of sensitivity to this pollen, it touched off an allergic emergency.

Occupational contacts may precipitate an allergic emergency; for example, fumes encountered at work may cause severe bronchial spasms. The ingestion of a commonly



administered drug like aspirin may be followed by acute edema of the mouth and glottis, severe asthma, or severe urticaria. Severe urticaria, contact dermatitis, or edema of the face and adjacent tissues, requiring emergency treatment, can follow the use of various cosmetics. Ingestion of a food to which the patient is allergic may produce acute gastrointestinal distress, nausea, vomiting, diarrhea, migraine, asthma, urticaria, and even unconsciousness.

#### *Insect or animal bites*

Some individuals are subject to constitutional reactions following insect bites<sup>(4)</sup>. There are reports in the literature of extreme shock resulting from bee or wasp stings, and of other less severe reactions following mosquito bites. Less well known is the fact that bites from the red bug or "chigger" about the genitalia may cause marked angioneurotic edema which interferes with voiding.

#### *Respiratory Manifestations of Allergy*

##### *Bronchial asthma*

Patients with severe asthma present a characteristic clinical picture. They may be in a state of marked collapse, with severe dyspnea or orthopnea. Pathologically, severe asthma is characterized by the production of tenacious mucus which blocks the bronchi, causing obstruction and spasm. Death usually results from asphyxiation *per se*. In most cases heart failure plays a very minor part, according to Lamson and Butt<sup>(5)</sup>; and this opinion is shared by allergists in general.

In severe bronchial asthma or status asthmaticus, *hospitalization*, preferably in a private room, is mandatory. Precautions to minimize the patient's exposure to such common allergens as dust and feathers should include the use of a rubber mattress and pillow, or dust-proof coverings over the mattress and pillow. Air-conditioning is helpful in controlling exposure to dust and pollen.

Psychotherapy is important. The patient should be kept as quiet as possible and given plenty of reassurance. Many of these acutely ill patients feel that they are on their deathbeds.

The diet is dependent upon the severity of the patient's symptoms, and upon any known food allergies. Nasal feedings through a Levin tube, which may be left in place for two or three days, is extremely important when the patient is too weak to eat and to

take adequate fluids. It is also simple to give oral medications through the tube.

In those patients who are not taking adequate amounts of fluid by mouth, glucose may be given intravenously in a 5 to 10 per cent solution in water or normal saline. A 50 per cent solution of glucose may be combined with 0.1 cc. of epinephrine (a 1:1000 dilution) and given slowly by vein. It is most important to keep the patient in an optimum state of fluid balance. Intake and output charts are very useful for this purpose.

The most important drug in the treatment of acute bronchial asthma is epinephrine. Every physician should always have this drug available in a 1:1000 solution for intramuscular administration. Repeated small doses (0.2 cc. to 0.5 cc.) administered in multiple locations are preferable to larger doses. Large doses of epinephrine sometimes produce a local vasoconstriction, which prevents absorption of the drug. Gentle massage at the site of injection will facilitate absorption. Epinephrine in either peanut oil or sesame oil has a more prolonged action; however, one has to recognize the possibility that a sensitivity to the oil may produce a further constitutional reaction.

Epinephrine may also be administered intravenously. It is preferable to give it as an infusion, in 500 to 1000 cc. of glucose or saline. One must always remember that some patients have a very limited tolerance to this drug, and may exhibit an epinephrine reaction.

Epinephrine in a 1:1000 solution may be given by nebulization. Norisodrine Sulphate (Abbott's) may be administered in an Abbott Aeroaler, using cartridges of 10 or 25 per cent powder. This is to be inhaled cautiously in the beginning, and the 10 per cent powder should be employed first in an effort to establish a dosage.

Aerolin Compound (Lilly) may be administered the same way as a 1:1000 solution of epinephrine, using a DeVilbiss no. 40 nebulizer. When any type of inhalation therapy is employed, one should instruct the patient to gargle with water immediately afterwards, since these drugs will dry the oral mucous membrane and frequently cause a secondary cough.

Ephedrine or racephedrine may be given in doses of 24 to 48 mg. (3/8 to 3/4 grains), either alone or in combination with a sedative such as a barbiturate or possibly chloral hydrate. This type of drug is usually necessary

to obtain a response to the drug. Some patients are made extremely nervous by ephedrine, and in some cases it interferes with voiding by causing spasm of the vesicle sphincter. Certain of the racephedrine have fewer side effects than ephedrine. Racephedrine and ephedrine have been given in combination with antihistaminics such as Hydrillin and Histadyl.

Aminophylline is one of our most important therapeutic agents. It may be given intravenously, orally, rectally, or intramuscularly (as a last resort, for these injections are very painful). In adrenalin-fast patients, aminophylline may be used temporarily until adrenalin again becomes effective. After repeated use patients build up a tolerance to this drug also.

For intravenous administration, aminophylline is put up in ampules of 10 and 20 cc., containing 0.25 and 0.5 Gm. ( $1\frac{3}{4}$  and  $7\frac{1}{2}$  grains) respectively. The dose is one to two ampules, and the solution should be given very slowly, preferably at the rate of 1 cc. per minute. Patients will complain of a sensation of heat and sometimes of pain in the back when the drug is given too rapidly. Occasionally improvement will be noted before all of the drug has been administered. Some patients, after taking aminophylline, complain of rather severe headache which may last for several hours. Nausea is one of the most frequent reactions, and many patients cannot take this drug because of protracted nausea and vomiting. Rectal aminophylline may be given in a suppository or by dissolving 0.5 Gm. in 45 cc. of water and administering it as a retention enema. This can be given alone or in combination with phenobarbital sodium or chloral hydrate. Rectal administration may have an advantage over the intravenous route, as it lessens the possibility of dizziness and faintness, and patients can be taught to administer it themselves.

Isuprel may be given sublingually in doses of 5 to 25 mg., or as Isuprel aerosol in a 1:200 dilution.

With the possible exception of Demerol, it is preferable not to give opiates to patients acutely ill with asthma. Opiates inhibit nature's mechanism for eliminating mucus from the bronchial tree, and frequently act as respiratory depressants. Nausea, vomiting, and marked itching of the nose are reactions which may cause patients further distress. It is true that opiates sometimes induce rest, but in general they are more harmful

than beneficial. Demerol may be the exception, and is given subcutaneously in doses of 50 to 100 mg. On occasion the cautious intravenous administration of 100 mg. in 1000 cc. of either glucose or saline might be justified; in general, however, this method of administration should be discouraged.

Steam inhalations with compound tincture of benzoin are desirable, particularly if the patient is having asthmatic bronchitis.

Therapy with ACTH or cortisone may be considered in critically ill patients. These drugs should be administered with great caution, in total dosages of 300 to 1200 mg. In my experience, the best results have been obtained from replacement therapy with cortisone rather than ACTH. Exacerbations and remissions are rather frequent with this type of therapy. I have observed patients who have been on cortisone for as long as six months, receiving 25 to 200 mg. a week, without any side effects or reactions and with sustained improvement. This drug, however, should be administered with extreme caution and by experienced clinicians.

Other drugs which are often helpful in the management of bronchial asthma include expectorants, sedatives, antibiotics, antihistaminics, antispasmodics, vitamins, and supportive drugs such as digitalis. A saturated solution of potassium iodide is one of the best expectorants. It should be given three times a day, in doses of 10 to 40 drops well diluted in water, or taken in cough mixtures. Sodium iodide given intravenously has been proved to be very satisfactory. The total daily dose is gradually built up from 1.0 to 6.7 Gm. (15 to 100 grains). Enteric coated ammonium chloride tablets, 0.5 to 1.0 Gm. ( $7\frac{1}{2}$  to 15 grains) every four hours are good if the patient can tolerate them. Robitussin (Robins') which contains glyceryl guaiacolate, is beneficial as an expectorant in doses of 50 to 500 mg., and is palatable.

Antihistaminics in dosages varying from 1 to 100 mg. every few hours are usually tolerated, and may be beneficial in controlling the nasal congestion and discharge; at times, however, they may create an abnormal dryness which initiates coughing or aggravates the patient's asthma.

Chloral hydrate in dosages of 15 to 20 grains, given by mouth or by rectum, alone or combined with sodium bromide in dosages up to 40 grains, is efficacious as a sedative. Barbiturates, including Nembutal, Seconal, sodium phenobarbital, Amytal, and Sodium



Amytal, are worth consideration. Paraldehyde given rectally, and occasionally intramuscularly, in dosages of 2 to 10 cc., is of value in relaxing a patient. The intravenous use of barbiturates as anesthetic agents is contraindicated. These patients are at times so ill and exhausted that the margin of safety is too narrow.

Ether, administered by inhalation, intravenously, or rectally, sometimes serves as a means of relaxing acutely ill asthmatic patients. If the inhalation method is used, it should be given by a competent anesthetist. Ether may be mixed with an equal amount of oil and administered by rectum. The dose is 5 to 7 ounces of the mixture for adults and  $1\frac{1}{2}$  to 2 ounces for children. Sweet oil, olive oil, cottonseed oil, or peanut oil may be used, but care must be exercised to prevent the patient from receiving an oil to which he is allergic. Retention enemas should be administered very slowly, using a small catheter in an effort to prevent the patient from expelling the material. A rebreathing tube should always be available when ether is administered, as marked relaxation may cause the patient's tongue to obstruct the passage.

Avertin anesthesia does not have as wide a margin of safety as ether in oil; however, it may be administered to adults in doses of 60 to 90 mg. per kilogram of body weight. Relaxation and rest are essential for these acutely ill asthmatics, and Avertin gives the patient a sense of well-being and lets him rest comfortably. This, too, should be administered by an anesthetist. Coramine and other stimulants should always be at hand to counteract the effects of overdosage of the drug.

Oxygen may be administered by one of several methods. The rate of flow should be 7 to 4 liters per minute, depending upon the degree of cyanosis and the condition of the patient. Hoods may be used for patients lying flat in bed, but in my experience they are not well tolerated by adults. Nasal oxygen may be given by catheter or by the open or closed mask. At times a positive pressure mask is beneficial. The tent is felt by many to be the most desirable method of administration since patients often object to masks, hoods, and nasal tubes. The temperature in the tent should be maintained around 72 degrees, depending on the patient's preference. A cooling system may be necessary if the temperature of the room is too warm.

A combination of helium and oxygen (20

per cent oxygen to 80 per cent helium) is more effective than oxygen alone. This mixture enables the patient to breathe more comfortably with less effort. It is administered by the same method used for oxygen alone.

Bronchoscopy to remove tenacious mucus plugs may be a life-saving measure. A local anesthetic is not necessary when bronchoscopy is performed in patients with severe asthma. If one is used, it should be employed with caution, as these agents sometimes cause fatal reactions<sup>(1)</sup>.

#### *Miscellaneous respiratory conditions*

*Asthmatic bronchitis* is handled in the same way as bronchial asthma, with the addition of antibiotic agents. The choice of a particular antibiotic depends upon the organism present and the history of the case. It is preferable *not* to use the slowly absorbed forms of penicillin. Crystalline aqueous penicillin is responsible for fewer complications. It may be given alone or combined with procaine in doses of 300,000 to 800,000 units per day. Aureomycin, Chloromycetin, and terramycin may be given in dosages of 50 to 250 mg. every three or four hours, day and night, for several days. The dose and duration of treatment depend upon the age of the individual and the nature of the infection.

Allergic bronchitis rarely constitutes an emergency. Occasionally, however, patients have a severe, recurring paroxysmal cough. Usually there is no associated dyspnea, wheezing, or infection.

Active *bronchiectasis* which is accompanied by fever warrants immediate treatment in the acute phase. Allergic bronchitis is an etiologic factor in a large percentage of the cases of bronchiectasis. Therapy must be directed toward controlling the patient's allergy as well as the infection. Thomas, Van Ordstrand, and Tomlinson<sup>(6)</sup> reported 190 consecutive cases of bronchiectasis, in one-half of which a major allergy of the respiratory tract was present. In this group the best response was obtained when the use of sulfonamides was combined with treatment for allergy.

*Hay fever* and *perennial allergic rhinitis* are rarely medical emergencies, but patients with acute seasonal hay fever demand prompt relief. Control measures include the use of antihistaminics and hyposensitization with pollen extracts. In general the use of nose drops is discouraged. However, eye drops containing boric acid (0.65 Gm.), epine-

phrine (8 cc. of a 1:1000 solution) and distilled water (*qs. ad* 30 cc.) will offer the patient considerable relief from itching. Antistine and other antihistaminic ophthalmic solutions and ointments are of limited value. The use of cocaine in eye drops or nose drops is discouraged. Only small amounts should be used on rare occasions for acute hay fever or allergic rhinitis.

### *Dermatologic Manifestations of Allergy*

In this discussion the term "allergic dermatoses" will be limited to those conditions or diseases of the skin in which allergy is of etiologic importance.

The eczematous reaction of the skin is one of an inflammatory type which may be described under the headings of occupational eczema, dermatitis venenata, eczematous dermatitis, or contact dermatitis. In this condition the epidermis is primarily involved by an edematous lesion, whereas the lesion of atopic dermatitis usually is located in the upper layers of the corium, particularly in the area of the capillary loop, and the primary lesions of urticaria are usually in the deeper layers of the corium. In diagnosing the dermatologic manifestations of allergy, a complete and detailed history is of paramount importance in order that we might bring out the atopic basis for the dermatitis. The character and distribution of the eruption are important in the differential diagnosis. The presence of vesicular lesions on exposed areas of the skin strongly favors the consideration of a contact dermatitis, whereas the lesions of an atopic eczema with lichenification usually involve the flexural areas.

### *Atopic dermatitis*

The term "atopic dermatitis" has synonyms, including "atopic edema," "allergic eczema," and "neurodermatitis." In general, these terms all designate an inflammatory condition of the skin which is characterized by lichenification and thickening that is flexural in distribution, occurs in atopic individuals, and results from a specific sensitivity to allergens that are usually water soluble. Atopic dermatitis is found in individuals whose immunologic processes differ in certain respects from those of a normal person. These patients usually give a history of asthma, hay fever, or atopic dermatitis which appears to be hereditary. Atopic dermatitis may be subdivided into three stages, seen in various groups: (1) infantile atopic

dermatitis (atopic eczema); (2) juvenile atopic dermatitis; and (3) the atopic dermatitis or disseminated neurodermatitis of the adult.

### *Contact dermatitis*

"Contact dermatitis" involving the epidermis<sup>(7)</sup> is produced by contacts with external irritants. It is predominantly characterized by a vesicular type of eruption.

Symptoms are most often sudden in onset; the areas first affected are usually the ones most severely involved and are those which receive the greatest exposure to the causative agent. In the acute stages, erythema is usually limited to the area of contact, and is associated with edema, vesiculation, oozing, and crusting. This type of dermatitis may be seen in combination with atopic dermatitis and other dermatoses resulting secondarily from treatment. Chronic lesions exhibit scaling, thickening and lichenification. The history, again, is of paramount importance, as it enables one to make the diagnosis and eliminate the causative agent, thus taking the first and most important step toward control of the lesions.

It is not always possible to eliminate the causative factors in the beginning, and hypersensitization should be considered when plant and animal emanations are etiologic agents. In such instances oil extracts are used most often. Symptomatic treatment<sup>(8)</sup> should be instituted promptly in all cases seen in the acute or subacute stages. By prompt treatment many cases are brought under control before they become chronic or intractable.

In the acute form, where there is weeping or edema, cold wet dressings are of value. In the absence of infection, Burow's soaks (4 Gm. of Burow's powder to 1000 cc. of water) is recommended when infection is present. Potassium permanganate in a dilution of 1:2000 to 1:6000 is beneficial, and should be applied as warm, wet dressings. Lotions of various types may be alternated with wet dressings. Those considered include calamine lotion, with or without phenol, menthol, camphor and liquor carbonis detergents; and calamine liniment or ointment may be used if lesions are dry.

For the treatment of the subacute form, boric acid ointment (10 per cent) or zinc oxide ointment has been found to be of value.

In the chronic type, where there is scaling, an ointment which may contain chrysarobin (2 to 4 per cent) resorcinol (4 to 10 per cent)



or salicylic acid (2 per cent) is beneficial. Roentgen therapy in fractional doses of 75 r given at weekly intervals for a period of ten treatments or less is of distinct value. This therapeutic aid may be used in both the acute and the chronic stages.

#### *Urticaria and angioneurotic edema*

We are all familiar with the characteristic lesions of urticaria and those of angioneurotic edema, which may be called giant urticaria. Etiologic factors include foods, inhalants, contactants, drugs, ingestants, nervous and psychogenic factors, intestinal parasites, infectious foci, endocrine upsets, and insect bites. Therapy is directed at the etiologic factor, and must be based on a detailed history.

Symptomatic treatment of the acute stages of urticaria has been considerably simplified since the advent of the antihistaminics. One must not forget, however, that some of these drugs may produce an exacerbation of the lesions. The dose varies from 2 to 5 mg., depending upon the antihistamine used, and the interval between doses is governed by the severity of the involvement. Other therapeutic measures include epinephrine and ephedrine preparations, intravenous calcium, and eradication of infections. Hospitalization is necessary in severe cases.

#### *Allergic drug reactions*

Most dermatoses produced by the internal action of drugs are termed drug eruptions. The responsible drugs may be divided into simple chemicals, either natural or synthetic, and complex mixtures—serums, vaccines, extracts, and the like. Some drug eruptions may be toxic reactions resulting from cumulative effects; examples are keratoses and discoloration of the skin resulting from deposits of metal. Drug eruptions<sup>(7)</sup> may be characterized by systemic symptoms and the involvement of single or multiple organs. Among their manifestations are fever, lymphadenopathy, malaise, prostration, psychoses, encephalitis, retinitis, optic atrophy, asthma, leukemia, eosinophilia, anemia, thrombocytopenia, blood dyscrasias, hepatitis, nephritis, hematuria, purpuric lesions, and even cardiac arrhythmia.

Sometimes it is possible to determine the responsible drug from the character of the lesion. The diagnosis of drug reaction is frequently suggested by the sudden appearance, the symmetrical arrangement and more or less generalized distribution of the lesion, or

the presence of itching. The treatment consists in supportive measures and removal of causal allergens.

#### *Fungus eruptions*

Allergic manifestations of superficial fungous infections and eczematoid dermatoses of bacterial origin are called "dermatophytid" and "bacterid." The treatment of these manifestations is symptomatic, as the lesions are of short duration. Treatment of the underlying fungous infection will usually result in a rapid disappearance of the dermatophytid. Prophylactic measures to prevent mycotic reinfection and a secondary allergic or id reaction are essential. One must exercise extreme caution when hyposensitization therapy with trichophytin or Oidiomycin is employed. Severe reactions to overdosage of these agents are not infrequent.

#### *Cerebral Manifestations of Allergy*

Bizarre cerebral symptoms such as headaches, blurring of vision, epileptiform attacks, and transitory impairment of vision often seem to coincide with allergic reactions. This discussion will be limited to severe headaches, both those of the migraine variety and other types. For the purpose of differential diagnosis, headaches are classified into the allergic and non-allergic types.

In *typical allergic migraine* the headaches are recurrent and may be unilateral; they are accompanied by visual or gastrointestinal disturbances, and by pain of varying intensity. Attacks are not infrequently preceded by an aura, and if treatment is instituted when this warning occurs, severe symptoms may be avoided. Drugs employed in the symptomatic treatment of migraine include Gynergen (ergotamine tartrate, found to be most effective when given by hypodermic in doses of 0.25 mg.) and Cafergone, which contains 1 mg. of ergotamine tartate and 100 mg. of caffeine per tablet. It is most effective when one or two tablets are given in the early stages of migraine. Gastric lavage immediately following ingestion of a known offending food will often prevent an attack of migraine. Saline cathartics and colonic irrigations are useful when a food or other agent has been in the gastrointestinal tract for some time. In a few instances, aspirin, Empirin Compound, Phenacetin, and other coal tar derivatives offer adequate symptomatic relief. However, narcotics in the form of codeine, morphine, dilauidid or Demerol may

be necessary. Inhalation of oxygen may be helpful, and barbituric acid derivatives such as Sodium Amytal, phenobarbital, Seconal, and Nembutal may enable the patient to sleep and thus control the symptoms. In general, however, the most important therapeutic consideration in migraine is the elimination of the causative allergen, which may be an inhalant or an ingestant. Hyposensitization with inhalants and with autogenous or stock vaccines may be helpful. General measures include the avoidance of fatigue and emotional upset, an adequate diet, and the use of glandular extracts (thyroid, pituitary, and so forth), dilute hydrochloric acid and bile salts. Surgical measures for the removal of foci of infection in teeth, gallbladder or tonsils, and even sympathetic ganglionectomy may be necessary.

*Headaches secondary to nasal obstruction.* This type of headache may prove to be quite severe, demanding prompt therapy. It is felt in the frontal region, and may also be termed a sinus or vacuum headache. It is best relieved by the shrinkage of the nasal mucous membrane with one of the vasoconstrictors such as Neo-synephrine, ephedrine, Privine, or cocaine, administered locally. These should be prescribed with caution, as addiction is not infrequent, particularly with Privine. Hyposensitization and prophylactic therapy directed at the causative factors may prevent the recurrence of such headaches.

#### *Ocular Allergy*

Ocular allergies may be classified according to the structures involved in an allergic reaction. Acute dermatitis of the skin about the eyes may be atopic or contact in type; it includes blepharitis marginalis and hordeoli, which may have an allergic or infectious basis. Acute conjunctivitis, which may be either palpebral or bulbar is painful at times and is sometimes associated with involvement of the cornea. The phlyctenular or ulcerative type of conjunctivitis, characterized by hyperemic or ulcerated areas, is rather distressing. In phlyctenular keratoconjunctivitis the involvement of the cornea may be superficial or deep, and multiple tiny ulcerations of the epithelial layer of the cornea may appear only after staining with fluorescein. These corneal infiltrations may be associated with chronic infection. If they are not treated promptly in a matter of hours, secondary scarring may lead to partial blindness.

Local therapy for ocular allergies includes

the use of astringent eye washes and drops, hot or cold packs, and epinephrine or antihistaminics, including Histadyl in an aqueous solution or an ophthalmic ointment. The local application of cortisone has given encouraging results in selected cases of acute conjunctivitis, keratitis and iritis<sup>(1)</sup>. Avoidance of the offending allergen is mandatory, and dietary restrictions and hyposensitization are worth while. After scarring or deep changes have occurred, treatment with Beta radium is of value when administered by an experienced person. Iritis may be treated with a course of cortisone or ACTH.

#### *Gastrointestinal Allergy*

Manifestations of gastrointestinal allergy include herpes of the lips, angioneurotic edema of the mouth and throat, aphthous stomatitis, abdominal discomfort, vomiting, halitosis, constipation, alternating diarrhea and constipation, intestinal cramps, nausea, pruritus ani, and symptoms such as burning of the mouth or rectum. A diagnosis of gastrointestinal allergy depends upon the exclusion of the more common clinical entities, and a therapeutic test.

Prompt treatment is just as essential for patients having severe pruritus ani or extensive aphthous stomatitis as for those patients with diarrhea or abdominal cramps. The treatment consists primarily in eliminating the offending food, or occasionally the drug or inhalant, which may be the specific causative factor. The use of certain antispasmodics, such as atropine, belladonna and the barbiturates is helpful, and in the acute abdominal crises epinephrine in a 1:1000 solution may be administered hypodermically. Antihistaminics afford symptomatic relief for patients having an intolerance to certain foods. In acute angioneurotic edema of the mouth or pharynx, the local application of a 3 per cent solution of ephedrine or a 1:1000 solution of adrenalin offers symptomatic relief.

#### *Genito-Urinary Allergy*

Acute allergic reactions of the genito-urinary tract may simulate more common genito-urinary diseases. Characteristic symptoms are frequency, burning, nervousness, nocturia, enuresis, ureteral colic, dysmenorrhea, leukorrhea, and vulvar or penile irritation. The diagnosis depends upon the exclusion of common causes. In cases of essential hematuria, one has to rule out a vitamin C



deficiency as well as purpura. An allergic reaction of the genitals may be caused by medication, contraceptives, or other contactants.

When the diagnosis of genito-urinary allergy is substantiated by the presence of other frank allergies in the personal or family history, treatment is directed at elimination of offending inhalants, foods, or drugs. Successful therapy requires close cooperation between the urologist and the allergist. Symptoms may be controlled with sedatives, antispasmodics, anodynes, adrenalin, antihistaminics and atropine.

A constitutional reaction secondary to drug therapy or to hyposensitization treatments may cause acute genito-urinary manifestations of allergy, such as uterine cramps and bleeding. In such cases treatment must be modified to prevent a recurrence of such symptoms.

### *Allergic Joint Disturbances*

A fairly high percentage of patients with rheumatoid arthritis have an allergic constitution. The possibility that bacterial sensitization might be an etiologic factor has prompted the use of autogenous or stock types of bacterial vaccines for desensitization or hyposensitization. In various joint disturbances the use of such vaccines has been followed by symptomatic relief, as well as general clinical improvement.

Intermittent hydrarthrosis is an accepted allergic phenomenon characterized by swelling, pain, and fluid in the joints. A sensitivity to specific foods may produce this condition, and adequate dietary management may control it completely. Similar reactions sometimes follow exposure to a physical agent such as cold. There are many foods which may cause acute angioneurotic edema or swelling of various joints, and this type of reaction has to be treated with antihistaminic drugs or with epinephrine and ephedrine.

### *Constitutional Reactions Coincident with Investigation and Treatment*

Constitutional reactions caused by allergy tests or overdosage of an extract or drug should be treated as follows: Have the patient sit down or lie down, and apply a tourniquet proximal to the site of inoculation. Inject 0.3 cc. of a 1:1000 solution of epinephrine into the opposite arm, and the same dose into the site of inoculation. The tourni-

quet may be loosened at intervals, depending upon the patient's symptoms. If anaphylactic symptoms recur, the tourniquet should again be tightened. The blood pressures could be checked from time to time, and if further allergic symptoms, (asthma, urticaria, angioneurotic edema) appear, repeated small injections of epinephrine (0.2 cc.) should be given in various localities. These areas may be massaged.

Ice cold compresses may be applied to urticarial lesions or to the initial site of reaction. If a series of skin tests have begun to flare up, cold towels or compresses may be applied to these areas.

Occasionally the patient may have an adrenalin reaction. When this occurs, chloral hydrate, 5 to 10 grains by mouth, or sodium bromide, 10 to 20 grains in half a glass of water, gives almost immediate relief. The patient should be stretched out in a supine position, and a cold towel applied to the head.

In order to avoid constitutional reactions, one must be extremely cautious about the dilution and dosage of extract given the patient, the interval between doses, and the number of extracts given at any one time. The patient should be required to remain in the doctor's office for half an hour or longer after receiving an injection, and should be advised against strenuous exercise for at least two hours after the treatment. If reactions are frequent and tolerance is low, a patient may carry Isuprel tablets, 10 mg., for sublingual use; or he may keep Amodrine tablets or a preparation combining ephedrine and a barbiturate for oral medication.

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Every mother of a family, and every doctor in practice, firmly believes that the best bulwark against infection is good wholesome food. The association of tuberculosis with poverty and malnutrition is particularly noteworthy. Editorial, *Lancet*, December 24, 1949.

## THE RHINOLOGIC MANAGEMENT OF ALLERGY OF THE UPPER RESPIRATORY TRACT

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PHILADELPHIA

The rhinologic management of allergy of the upper respiratory tract assumes importance, not only because numerous rhinologic abnormalities are due to allergy and many allergic manifestations are influenced by nasal and paranasal sinus pathology, but also because allergy of the upper respiratory tract is not always fully controlled by allergy measures alone.

Neither the rhinologist nor the allergist will disagree with the rule that adequate allergy investigation, followed by adequate allergy measures, should inaugurate the management of every individual afflicted with allergy of the upper respiratory tract. Those allergic patients who receive either satisfactory or permanent relief with allergy measures alone do not need, and should not be subjected to, rhinologic procedures. It is only when desensitization, dietary controls, and environmental changes fail to control the symptoms, or when abnormalities of the nose and sinuses influence the course of bronchial asthma, eczema, and urticaria, that direct measures are indicated.

### *Manifestations of Allergy in the Upper Respiratory Tract*

Allergy of the upper respiratory tract is an insidious cause of nasal and sinus disease. When it appears in the form of *seasonal hay fever or pollinosis* it is prone to leave no trace of tissue changes and, as a rule, is not complicated by secondary infection and the introduction of a bacterial factor in sensitization. *Intermittent allergic rhinitis*, appearing at brief and irregular intervals, subsides without residual tissue changes, and rarely is accompanied by secondary infection.

*Perennial allergic rhinitis*, however, is the most important respiratory allergy, as well as the most neglected and the least effectively treated<sup>(1)</sup>. It occurs more frequently than any other allergic affection of the respiratory tract, but in its early stages is so mild and inoffensive that medical assistance is sought only when secondary infection occurs in the paranasal sinuses, or mucous nasal polyps have formed, or when that most serious of all

allergic states—bronchial asthma—appears. A clear history of perennial allergic rhinitis can usually be obtained from patients with such allergic disorders as urticaria, eczema, and some forms of migraine. The majority of patients with asthma have had perennial allergic rhinitis for many years, and “intrinsic asthma” is usually the late complication of a long neglected perennial allergic rhinitis<sup>(1)</sup>.

### *Causative Agents*

The primary allergic response in the upper respiratory tract appears in the mucosa and stroma of the inferior and middle turbinates, and is initiated by direct contact with an allergen which has gained entrance to the nasal passages, or by the more indirect contact with blood-borne antigens, absorbed from the gastrointestinal tract. In sensitized individuals, absorption of foods or drugs from the gastrointestinal tract frequently is followed by a positive response in the turbinate tissue, but the role of blood-borne allergens has been overshadowed by the more prompt and obvious effects of air-borne allergens.

A characteristic granular, pale stippling of the posterior portion of the middle turbinate is often the first evidence of food sensitization to appear in the upper respiratory tract. While *inhaled* and *ingested substances* are the most common causative agents, *injected substances* (animal sera, allergens, endocrine products), *physical agents* (heat, cold, sunlight, barometric pressure), *non-specific irritants* (gases and chemical fumes), *endocrine substances* (products of endocrine dyscrasias), *psychosomatic factors*, and *infection* (bacteria or their products) are capable of precipitating typical allergic reactions.

### *Tissue Changes Due to Allergy*

The primary allergic changes in the turbinates consist of thickening and hyperplasia of the epithelium, edema of the basement membrane, and edema and eosinophilic infiltration of the stroma. These tissue changes are directly due to vascular phenomena which are precipitated by the contact of a specific allergen with sensitized tissue. The train of events is as follows<sup>(2)</sup>:

1. The arterioles contract, blocking the circulation.

2. The consistency of the endothelium is altered so that leukocytes adhere to the walls of the capillaries and venules in large numbers.

Read at the Watts Hospital Symposium, Durham, North Carolina, February 15, 1951.



3. The leukocytes emigrate into the surrounding tissue.

4. The leukocytes adhere to each other, forming leukocytic thrombi and frequently occluding venules and capillaries.

5. Rapid increase of intercellular fluid, due to increased permeability of the capillary walls.

The gross changes in the mucosa of the nasal passages and the paranasal sinuses are the result of these basic vascular phenomena. While they appear first in the turbinal tissue, the mucosa of the ethmoid air cells and the maxillary sinuses soon participates in the allergic response because of its intimate vascular connections with the inferior and middle turbinates. The frontal sinuses tend to become involved much later, and to a lesser degree, because they are less intimately related with the turbinate bodies.

Allergic changes in the soft tissues of the sphenoid sinuses are comparatively rare, because the orifices of these air spaces are still more remote. When surgical intervention becomes necessary, the ethmoid cells and the maxillary sinuses are most likely to require intervention, while the frontal and sphenoid sinuses are rarely molested.

Since allergic rhinitis of a seasonal or transient character fails to induce permanent tissue changes, the nose and sinuses return to normal after each attack. In contrast, the allergic edema of the perennial type persists until irreversible tissue changes are induced: diminished or lost ciliary action deprives the mucosa of its normal function in propelling the mucous secretion toward the sinus ostia, and thence to the nasopharynx; simple allergic edema is replaced by pallid and firmer tissue; allergic edema, coinciding with intercurrent infection during the colder months of the year, facilitates the acquisition of complicating infectious sinusitis, acute or chronic, with further hyperplastic changes in the mucosa. The late stage of perennial allergic rhinitis is characterized by the appearance of mucous polyps, which may be unnoticed until one or both nostrils become totally obstructed.

The abnormalities encountered within the sinuses vary in degree according to the duration of the allergy and the presence or absence of secondary infection. In general, these are:

1. Simple edema of the lining membrane, which is transient and disappears when the

allergen is withdrawn or desensitization is accomplished.

2. Permanent hyperplasia of the lining membrane.

3. Polypoid degeneration of the lining membrane.

4. Cystic degeneration of the lining membrane.

5. Secondary infection frequently accompanied by loculated abscesses of a fluid level.

6. Necrosis of the hyperplastic membranes with complete loss of histologic structure.

7. Absorption of bone about the involved soft tissues.

### Diagnosis

*Investigation of allergy of the upper respiratory tract* should include the following:

1. A complete and painstaking *history*.

2. Thorough *allergy investigation* by a competent allergist.

3. Thorough *clinical investigation of the upper respiratory tract*, including examination of the turbinates, before and after vasoconstriction, using a good light and a nasal speculum; nasopharyngoscopic examination, and the examination of the nasopharynx with a post-rhinoscopic mirror or Beck's pharyngoscope.

4. *Transillumination*.

5. *Roentgenologic examination*, with and without opaque media.

6. Examination of the *cytology of nasal and sinus secretions*. Eosinophilia is the rule in uncomplicated allergy, while neutrophilia is the rule in infection. Allergy complicated by infection presents a mixed picture and one difficult to evaluate. Moreover, eosinophils are absent during those intervals when there is no allergic reaction, even though the tissue changes persist.

### Medical Management

The *rhinologic management of allergy of the upper respiratory tract* aims to accomplish the following:

1. Effect symptomatic relief.

2. Restore physiologic function.

3. Prevent progressive tissue changes.

4. Prevent or eliminate infection.

5. Correct contact areas.

6. Provide an adequate olfactory space.

It is necessary to provide some measure of relief to those patients in the throes of active nasal allergy, or during the interval when desensitization is in progress, or when allergy measures fail. Topical applications and oral or parenteral administration of various therapeutic agents may enable the harassed pa-

tient to carry on many normal activities even though they do not afford complete relief.

### Drugs

The *topical use* of drugs should be confined to sprays, because cotton pledgets and applicators merely irritate further the already unstable nasal tissues. The agents are dissolved in normal saline or a 5 per cent solution of glucose. Ephedrine sulfate (1 to 3 per cent solution), Neo-synephrine (.25 to 0.5 per cent solution) and Propadrine (1 to 3 per cent solution) are efficient vasoconstrictors. Privine (0.1 per cent for adults and 0.05 per cent for children) is promptly positive in action, but may be followed by excessive secondary relaxation. A most useful spray consists of:

Cocaine hydrochloride.....	0.6 Gm. (10 grains)
Ephedrine hydrochloride.....	0.6 Gm. (10 grains)
Adrenaline chloride (1:1000 solution).....	1.3 cc. (20 minims)
Antipyrine.....	0.4 Gm. (6 grains)
Aqua.....	90.0 cc. (3 ounces)

*Oral administration* of drugs is often more effective in the control of nasal symptoms than topical applications. Ephedrine sulfate or hydrochloride, in doses of 24 mg. (3/8 grain) three times a day, continues to be the drug of choice, unless side effects militate against its use. When rhinorrhea is especially marked, a capsule containing 24 mg. (3/8 grain) of ephedrine hydrochloride, 8 mg. (1/8 grain) of phenobarbital, and .15 mg. (1/400 grain) of atropine sulfate, is useful when administered three times a day. Potassium chloride in saturated solution, when given in doses of 0.6 to 2 Gm. (10 to 30 grains) four times a day, produces only a temporary effect, which is dependent upon the transient shift in water balance. Its use is limited and unreliable. Ascorbic acid may be administered by mouth in daily doses of 100 to 500 mg. with some benefit to an occasional hay fever patient, but in general it is valueless, except in persons with latent or subclinical scurvy.

A large series of antihistaminic drugs are now available for the palliative treatment of nasal allergy. The search for histamine antagonists, stimulated by the concept that histamine plays a prominent role in anaphylactic and allergic reactions, led to the introduction of Pyribenzamine and Benadryl, and later of numerous other compounds related to them. Because of the multiplicity of side effects, considerable care must be employed in the selection of antihistaminic drugs in order that a maximum of sympto-

matic relief is obtained with a minimum of deleterious effect. It is also well to emphasize that prolonged administration of antihistaminic drugs may induce irreversible effects due to chronic toxicity, and thus involve the central nervous system, the genito-urinary system, and the hematopoietic system.

*Parenteral administration* of drugs is also employed for temporary control of allergic symptoms of the upper respiratory tract. Subcutaneous injections of epinephrine in doses of 0.5 cc. are valuable for the immediate effects, which may then be prolonged by the oral administration of other drugs.

Because of the suspected role of histamine in the mechanism of allergy, attempts have been made to produce a tolerance to histamine by repeated administration of this agent. The results are discouraging, and, when not totally ineffective, the method probably operates through a nonspecific action.

ACTH and cortisone frequently ameliorate the symptoms, and in some instances induce marked regression in the allergic tissue changes, even to the extent of causing the disappearance of polyps. The effects are not permanent, and discontinuance of the drugs is followed promptly by reappearance of symptoms and the pathologic tissues produced by allergy.

All drugs thus far available are only temporary and palliative in action. There is little doubt that in many instances they diminish the rate at which the nasal and sinus mucosa undergo hyperplastic changes. Attempts to find a method of producing more prolonged effects have usually been limited to drastic local procedures. These aim to render the mucosa less sensitive to allergens and irritants, reduce the bulk of the turbinal tissues, and diminish the incidence of secondary infection by increasing aeration and drainage.

### Cauterization

Chemical agents, such as 25 per cent trichloroacetic acid, phenol, chromic acid and silver nitrate beads, and potassium hydroxide solutions have been used on the inferior and even middle turbinal tissue. Judicious use of chemical cauterization is occasionally useful, but the results are temporary. Septal perforations tend to occur when caustic substances are applied to directly opposite portions of the septum, and therefore the chemicals should be applied with precision to turbinal tissue alone.

The electrocautery, either applied along



the long axis of the turbinate to be treated, or introduced in the form of two long needles (bipolar electrode) directly into the turbinal tissue well below the mucosa, reduces the bulk of the turbinate and as a rule results in more prolonged effects than does chemical cauterization.

Zinc ionization produces temporary palliation which is sometimes surprisingly prolonged. Considerable difference of opinion persists concerning the frequency with which the olfactory area is involved, with subsequent loss of the sense of smell. In proper hands, zinc ion transfer appears to be a relatively safe procedure. The membranes are cleansed of secretions, and, under local anesthesia, long fiber cotton tampons, thoroughly moistened with 1 per cent solution of zinc sulfate, are introduced into the nostrils. Zinc wire is used as the active electrode and, after being introduced into the center of the tampons, is fastened in a headband. The negative pole is connected with a felt pad moistened with sodium chloride solution and attached to the arm, leg, or some other body surface. The completed circuit consists of a battery of cells to provide a galvanic or constant current, a milliammeter to measure the dosage, and rheostat to permit the gradual increase and decrease of current. The average treatment has been estimated to require about 100 to 150 milliamperes-minutes, the current being slowly increased to 5 to 15 milliamperes. A weak current over a long period is more effective than a strong current over a shorter period<sup>(3)</sup>.

### *Surgical Management*

Surgical measures, when necessary, indicate failure of, or neglect to carry out, allergic measures. No single operative procedure is specific, and surgical intervention never is followed by alteration in the skin reactions or in the basic sensitivities. Each patient presents a special problem and demands a special solution.

### *Preliminary investigation*

When the allergy investigation has been completed, it will be found that the case falls into one of three groups: (1) *Allergy of the skin-sensitive type*, as demonstrated by skin tests, patch tests, or elimination diets, which almost never requires surgery; (2) *allergy of the non-skin-sensitive type*, in which there is disease of the upper respiratory tract alone, with foci of infection and negative skin tests, and which most frequently demands

surgical intervention; and (3) *allergy of the combined type*, with both positive skin reactions and foci of infection, which may or may not require surgical intervention, depending upon the prior trial of allergy measures.

The most important nasal and sinus abnormalities in allergic conditions have received fairly general recognition.

1. *Nasal anomalies* such as septal spurs, ridges, and deviations, as well as various types of atresia, are important factors.

2. *Hypertrophies and hyperplasias* may take place in the turbinates or the sinus mucosa or both, and the end stage is commonly polyposis. Such tissue alterations may be due to allergy alone, infection alone, or to a combination of allergy and infection.

Nasal anomalies, hypertrophies and hyperplasias are in the main *mechanical factors*. They produce nasal obstruction which is followed by mouth-breathing, so that allergens ordinarily filtered out in the upper respiratory tract gain immediate access to the lower respiratory tract. Abnormal lateral contacts in the nose lower the threshold of absorption, produce pressure reflexes causing discomfort, headache and even asthma, and prolong local infections. In the presence of septal deviation, the more spacious side soon exhibits compensatory hypertrophy of the turbinates, with subsequent interference with the integrity of the sinus ostia on that side. The loss of the olfactory space because of polyps or hyperplastic turbinal tissue is of serious moment in the asthmatic patient. Anosmia is soon followed by paroxysms of sneezing unrelated to the presence or absence of allergens. Other reflexes appear to be initiated by mechanical factors in the region of the sphenopalatine ganglion.

3. *Infection* always intensifies allergic symptoms which are already present. Primary infection may lead to bacterial sensitization, which in turn precipitates allergic manifestations; infection, secondary to the primary allergy, may likewise lead to bacterial sensitization.

Neither laboratory nor skin tests can be used to corroborate the theory of bacterial allergy, but considerable evidence has been gleaned by clinical observation: Acute infectious disease frequently precedes or accompanies bronchial asthma, allergic rhinitis, and sometimes urticaria and eczema; the elimination of foci of infection frequently relieves prolonged allergic manifestations;

typical allergic symptoms can often be precipitated by the administration of an autogenous vaccine; in asthma induced by infection, the blood eosinophilia is more marked and more consistent than in non-infective asthma; patients with so-called bacterial allergy give a clear-cut familial history of allergy. Infection may not only be one of the causes of asthma, but may also play an important role in such cutaneous manifestations of allergy as urticaria and eczema.

### *Surgical procedures*

Surgical intervention should be confined to the restoration of physiologic function, the elimination of infection, and the restoration of the olfactory space. In seeking these objectives, all normal mucosa must be preserved, even though abnormal mucosa may be sacrificed with impunity. Operative failures are usually due to insufficient pathologic justification for surgery, to the presence of sinus disease which is not the cause of the allergic symptoms, to incomplete or poorly performed operations, and to inadequate postoperative care.

The maximum improvement may not be obtained for six months or more after the final surgical procedure, and it is always unwise to predict immediate relief of symptoms. Some immediate improvement may be due to the nonspecific effects of the surgical trauma and has been observed to follow not only operations on infected sinuses but also those involving the appendix, the gallbladder, or the mastoid process.

The removal of nasal polyps is probably the most common operation in individuals with allergy of the upper and lower respiratory tracts. Regression of polyps may be brought about by irradiation or the administration of ACTH or cortisone, but recurrence is inevitable without control of the underlying allergy. When polyps reach dimensions which indicate an irreversible tissue change, they must be removed. The snare should be engaged so as to separate the polyp as close to its base as practicable, and the base then cauterized with a 25 per cent solution of trichloroacetic acid to delay the reappearance of polypoid change.

The correction of minor septal abnormalities is rarely of value, but in the presence of major obstruction or constant contact areas, submucous resection is indicated. Where intermittent contacts between the septum and turbinate tissue exists, pressure with a cotton

wound applicator will sometimes induce paroxysms of wheezing, and correction is in order.

The maxillary sinus is often the seat of marked mucosal alteration in the allergic individual. Only too often irrigation of such an antrum is misleading, because the return fluid is clear, whereas at operation the sinus is found to be filled with polyps and hyperplastic tissue, with loculated pus enmeshed at some distance from the site of puncture or the ostium of the spine. As a rule, roentgenologic studies, with and without opaque media, are an absolute essential for the evaluation of the status of the maxillary sinuses of allergic patients. Hyperplastic tissue and masses of polyps progressively encroach upon the air-containing space, until the sinus is completely devoid of air. Thereafter the abnormal tissues tend to undergo necrosis and eventual conversion into a putty-like substance which demonstrates no cellular structure when examined microscopically. Accompanying these changes is the gradual absorption of the bony wall of the antrum, which is demonstrable in roentgenograms. Irrigations of such antrum, or even the construction of a nasoantral window, are now completely valueless, and it becomes imperative to evacuate the contents of the sinus by the Caldwell-Luc operation. The construction of a large and permanent nasoantral window is an important part of this procedure.

If the olfactory space can be restored without the sacrifice of turbinal tissue or a portion of the ethmoidal labyrinth, little more need be attempted. Frequently, however, degeneration of the middle turbinate may be so extreme as to demand the removal of the entire structure. Complete exentuation of the ethmoid cells becomes necessary when there is evidence of complete filling of the cells with advanced bone absorption about them. Intranasal surgery suffices for these procedures, although on rare occasions the external approach of the Ferris Smith operation is to be preferred.

Allergic changes in the mucosa of the frontal and sphenoidal sinuses are usually absent or minimal, and surgical intervention is required only in those infrequent instances when these sinuses are the seat of uncontrolled infection with empyema.

### *Summary*

Allergy is undoubtedly a cause of nasal and sinus disease. Perennial and seasonal al-



lergies contribute to infections of the upper respiratory tract, and therefore must be treated, not merely for their own sake, but also to prevent acute and chronic infections, with their train of serious sequelae. Because of the role played by nasal and sinus abnormalities, rhinologic measures continue to be an important part of the management of many patients with bronchial asthma and of some patients with urticaria or eczema.

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## SUPERIMPOSED INFECTIONS IN RESPIRATORY ALLERGY

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Respiratory allergies and respiratory infections are closely related. Each may occur independently or in combination with the other. Frequently, one will observe a definite allergic involvement of the nose and paranasal sinuses, which is recurrently subjected to superimposed infections.

Nasal allergies and infections must be distinguished from the vascular and secretory disturbances of the nose arising from acute or chronic irritations of the nasal mucosa, such as one sees secondary to chemicals and other nonallergic conditions, including cerebrospinal rhinorrhea, tuberculosis, syphilis, and complications of endocrine disorders, avitaminosis, circulatory and renal diseases<sup>(1)</sup>.

### *Allergy of the Nose and Paranasal Sinuses*

Chronic diseases of the nose and paranasal sinuses fall into three divisions. First is allergy or sensitivity to certain allergens or antigenic substances. Patients with this condition present symptoms such as sneezing, itching, obstruction, discharge, edema, eosinophilic infiltration of the involved tissues, and the presence of eosinophils in the secretion. The second division is allergy with superimposed infections. Patients in this group usually have a purulent discharge which contains bacteria and a predominance

of neutrophils. The inflamed tissues are infiltrated with neutrophils, lymphocytes, and connective tissue cells, as well as bacteria. Infected membrane not associated with allergy marks the third group. This membrane is usually thin and fibrous, and is sometimes covered with granulation tissue. Polyps are very rare in this group.

Shambaugh<sup>(2)</sup> has estimated that 70 per cent of the patients having chronic infections of the sinuses, and 90 per cent of those with chronic nasal infections, have an underlying allergic factor which is responsible for the chronicity.

Kune and Linton<sup>(3)</sup> have reported that 19.4 per cent of the nasal complaints presented by a group of 720 patients were explained on basis of allergy.

Infections outside of the nose and paranasal sinuses include (1) those stemming from an abscessed or infected tooth involving a sinus, and (2) those with a sinus resulting from the removal of a tooth with a root extending into the antrum.

### *Diagnosis*

To differentiate between nasal allergy and infection, it is necessary to take a careful history, and to correlate the data obtained with the clinical, rhinoscopic and roentgenographic findings, and the cytologic studies of nasal smears.

Serious conditions of the nose and paranasal sinuses may be diagnosed on the basis of symptomatology and rhinologic examination. However, there are times when laboratory studies of the blood and urine, as well as pathologic studies of the nasal, sinus and bronchial secretions, are needed. In the presence of a predominant infection, the cytologic picture of these secretions is characterized by a neutrophilia. In uncomplicated allergy, the cytologic picture is marked by a pure eosinophilia. In allergy with infection, the cytologic picture at the time is one of mixed eosinophilia and neutrophilia. It may be desirable to obtain specimens from the antra as well as the nose. Specimens may be obtained by having the patient blow his nose on wax paper or cellophane handkerchiefs, or cotton swabs may be used in selected cases when no secretion is available from blowing.

Hansel<sup>(4)</sup> worked with various types of stains, including Giemsa's and Wright's, and felt that an improved stain of eosin-methylene blue which he developed was superior.

Particularly in children, periodic flare-ups, with fever and discharge, which become muco-purulent, are observed. There was a time when, after repeated episodes, removal of adenoids was recommended as the best form of treatment, regardless of the age of the child. Although many patients responded well, many others did not; and since the introduction of the antibiotics, many of the results have been doubtful.

When one is confronted with the question as to whether children are suffering from chronic infection, repeated infections, or an allergic manifestation, the most important point to consider is the family background. History of allergy or allergic diseases in either parent is significant. Other concomitant allergic manifestations such as eczema or hives must also be considered. It is a great mistake to administer sulfonamide drugs, penicillin, aureomycin, or other drugs for flare-ups of nasal symptoms, particularly if they have occurred over a fairly reasonable length of time. A chronic cough in association with allergic rhinitis develops in many of these children, and may be a forerunner of bronchial asthma. The latter has been found to occur more frequently without infections than with infections.

#### *Complications*

Superimposed infections, as well as severe allergic rhinitis, may be complicated by involvement of the middle ear, with recurrent deafness alternating with periods of normal hearing. Other complications are those associated with otitis media, caused by these superimposed infections. Since the advent of the various antibiotics, there is less need for excision and drainage in acute mastoiditis or further complicating meningitis. According to Arbuckle<sup>(5)</sup>, polyps in the early stages usually recede under allergic management; however, with exacerbations of the allergy or the recurrent infections, growth of polyps may be restimulated. Patients having obstructive symptoms from polyps *per se* or from those associated with recurrent infections may require an operation to relieve the obstruction; the operation should be conservative.

Woodward and Swineford<sup>(6)</sup> found that in a group of 128 allergic patients 61 had no significant complications and the remaining 67 had complications either infective or non-infective. Of the patients with infections, 25 had chronic ethmoiditis with obstruction; 9

showed pansinusitis, with marked mucosal degeneration; 9 had chronic maxillary sinusitis, and 4 suffered from acute or subacute maxillary sinusitis.

In discussing the end results of external operations on the frontal, ethmoid and sphenoid sinuses, Arbuckle concludes:

"Rhinologists have seen the rise in popularity of surgical treatment of sinusal disease on the basis that infections were the underlying cause in all cases. During all this time, in a number of patients, relief was not obtained by such treatment. Then they found that many such conditions are not of infectious origin but are allergic. Accordingly, the popularity of operative treatment has decreased, almost to the exclusion of certain types of surgical intervention, in favor of antiallergic therapy."

Arbuckle and others have further observed that when surgical procedures are performed on the sinuses, if the patient's allergies remain untreated, these patients will get only temporary relief and allergic manifestations will recur following exposure to allergenic substances.

#### *Allergies and Infections of the Lower Respiratory Tract*

##### *Allergic bronchitis*

Allergic bronchitis may be divided into three classes: (1) the perennial type, which may be either chronic or recurring; (2) the seasonal type; (?) asthmatic bronchitis, which is believed to be a bacterial manifestation of allergy.

Allergic Bronchitis manifests itself during infancy, childhood, or the early adult years. It may occur alone or be complicated by secondary infections. The term "allergic bronchitis" is used to include the allergic reaction to one or more specific sensitizing substances by a susceptible individual, and the condition is characterized by chronic, recurring or paroxysmal cough which usually occurs in the absence of any frank respiratory tract infection or intrathoracic disorder that might account for the bronchitis. Many patients with allergic bronchitis are subject to complications if they are untreated. These complications include bronchial asthma, emphysema, asthmatic bronchitis, and bronchiectasis.

##### *Asthmatic bronchitis*

Children, particularly, are more likely to have asthmatic bronchitis than bronchial asthma. Since the diagnosis of asthmatic bronchitis is commonly made, it is important to determine whether these cases represent instances of respiratory infections in an asthmatic child during an attack of asthma,



or whether they represent wheezing in a non-atopic child with bronchitis. We must remember that many infants who have no personal or family history of allergy develop a spasmodic bronchitis in association with acute respiratory infections. Stoesser<sup>(7)</sup> reports that as a child grows older there is less tendency toward a spasmodic bronchitis. During the first attack it is not always possible to determine whether or not the child has allergic asthma. Periodically there may be a flare-up, with fever. He states: "The presence of a positive allergic history, an eosinophilia, and response to epinephrine aid in determining the allergic nature of the attack."

Glaser<sup>(8)</sup> observed that asthma may be accompanied by slight elevations of temperature (over 37.7 degrees C or 100 degrees F rectally), probably due to the increased metabolism secondary to the muscular exercise incident to the dyspnea. He felt further that these attacks of asthmatic bronchitis occurring at any age are accompanied by the physical signs of asthma, including wheezing and evidence of a respiratory infection.

The main points that must be observed in differentiating asthmatic bronchitis from bronchial asthma are: the onset commonly is marked with coryza and usually with fever; there is a poor response to epinephrine hydrochloride; nasal smears show a predominance of neutrophils, and the sedimentation rate is somewhat increased. Children, particularly, who have had recurrent attacks of asthmatic bronchitis are candidates for asthma as they grow older.

Thomas and Taylor<sup>(9)</sup> made a study of 2033 consecutive admissions of patients with various forms of allergy and found that 12 per cent had allergic bronchitis. Forty-six per cent of this group of 244 patients stated that the onset of their chronic bronchitis followed some upper respiratory infection—namely, severe colds, pertussis, influenza, pneumonia, and the like. This may be explained by the fact that when the respiratory mucosa is the site of infection in an allergic person, the mucosa is less resistant, and sensitizing proteins find it easier to gain entrance. In some cases, the onset of a chronic bronchitis follows a primary attack of true asthmatic bronchitis.

#### *Bronchial asthma*

Bronchial asthma may be recurrent, acute, or chronic; not infrequently it is associated

with low-grade infection, either of the bronchial tree or upper respiratory tract. Patients having bronchial asthma who contract respiratory infections frequently have a marked exacerbation of their symptoms, and are not relieved by the drugs that commonly give relief, such as ephedrine, aminophylline, epinephrine, Norisodrine, Aerolin compound and others. It is not unusual to see patients subject to either chronic or recurring attacks of bronchial asthma develop acute respiratory infections and have symptoms of quite severe asthma or, at times, status asthmaticus. During the acute symptoms, prior to institution of antibiotic therapy, it is worth while to prepare autogenous vaccines from cultures made from the nasal passages as well as the sputum; however, one does not wait for the completion of the vaccines before instituting other therapy.

#### *Bronchiectasis*

Bronchiectasis must be considered in those patients who cough, those who expectorate large amounts of sputum and/or those who have medium and coarse rales over the lung bases. The diagnosis of bronchiectasis is anatomic rather than etiologic. Acquired bronchiectasis may arise from (1) the presence of infection which, in the course of subsequent inflammatory reaction, weakens or destroys the elasticity of the bronchial wall; and (2) the action of a dilating force upon the infection—weakened bronchi. Studies of the bacterial flora from these bronchial lesions reveal a mixture of pyogenic organisms. A few show fusospirochetal involvement, as well as the presence of tubercle bacilli in some cases. The absence of any predominant type or particular group, with the exception of a fusospirochetal and tuberculous form, minimizes the importance of the bacterial factor.

Of 190 consecutive patients having bronchiectasis seen over a five-year period at the Cleveland Clinic, 48 per cent had major allergy of the respiratory tract, according to Thomas, Van Ordstrand, and Tomlinson<sup>(10)</sup>. Fifty per cent of this group gave a history of respiratory infections. Allergy was considered to be a complicating factor. In 31 cases, sinusitis was found on the initial examination, or there was a history of pus having been found on irrigation of the sinuses; 28 of these patients had associated allergy of the respiratory tract. Treatment in the form of chemotherapy, with sulfonamide

drugs as the chief or only therapeutic measure, was directed in 23 cases. Twenty-one cases were treated chiefly or wholly with allergy management. In 31 cases a combined allergy and sulfonamide therapy was used. Recurrences of symptoms of original severity were frequently noted following acute respiratory infections, or cessation of allergy management, or in some cases when infrequent courses of sulfonamide drugs were used.

### *Loeffler's syndrome*

Loeffler's syndrome has to be considered when the shadow of pulmonary consolidation is encountered, and when these shadows vary in the amount of infiltration, from time to time, without the accompaniment of physical signs or symptoms. In typical cases, transient allergic pulmonary consolidation is a fairly well defined diagnosis that is exhibited by roentgenographic examination.

The essentials of Loeffler's syndrome have been listed by Hansen-Pruss and Goodman<sup>(11)</sup> as follows:

"(1) Varying degrees of pulmonary consolidation at times multiple, often migratory, recognized by roentgenographic examination of the chest; (2) Its occurrence in allergic individuals; (3) A varying leucocytosis and eosinophilia; (4) Afebrile clinical course; (5) Persistent severe asthma; (6) Lack of response to known sulfonamide drugs; and (7) History of frequent upper respiratory infections."

All of the six patients reported by these two men had severe bronchial asthma. Although most of the patients with Loeffler's syndrome run an afebrile course, slight elevations of temperature sometimes occur.

### *Treatment*

In the general consideration of superimposed infections in respiratory allergy, one not only has to consider the types of infection but also must determine the treatment that will offer the most rapid control of the infection and that will not likely cause the patient any drug reaction (sensitivity to previous drugs should be elicited). A combined approach by both the rhinologist and the allergist includes local therapy, antibiotic therapy, anti-allergic management, and symptomatic therapy. Lower respiratory tract therapy is dissimilar, but occasionally requires the assistance of a bronchoscopist to aid in diagnosis as well as therapy. Bronchoscopy should never be performed on an asthmatic

patient unless the proper organization and bronchoscopic setup is available.

Autogenous vaccines prepared from specimens of bronchial aspirations, sinus irrigations, cultures from the nose and throat, and sputum offer a useful therapeutic measure particularly in those patients who have secured no relief from prolonged courses of treatment with stock vaccines and other types of sensitization therapy as well as chemotherapy. I will not attempt to go into a detailed consideration of individual antibiotics but will only comment that certain of these preparations are more efficacious in one patient than in another. Certain preparations may not be tolerated by a patient, and a different antibiotic may be substituted with good results. On occasion, an ordinary dose may not bring about a remission of symptoms when the doubling of a dose will. Dosages may be tailored to fit the individual case in relation to the amount and length of therapy. On occasion certain of these chemotherapeutic agents have been continued over a period of months as symptoms warranted, depending upon the judgment of the physician. In general, however, prolonged courses of therapy are discouraged.

### *Summary*

Varied allergic conditions involving the respiratory system either directly or secondarily related to superimposed infections have been presented. Detailed therapeutic considerations were omitted with reference to dosages, specific drugs or antibiotics, as they are considered by other participants of this panel discussion.

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## THE OCULAR SYMPTOMS OF MIGRAINE

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Before describing the ocular symptoms of migraine, it will be useful to consider Wolff's definition of the disorder:

"By migraine I mean periodic headache, usually unilateral in onset, but which may become generalized. The headaches are associated with irritability and nausea, and often with photophobia, vomiting, constipation and diarrhea. Not infrequently the attacks are ushered in by scotomata, hemianopsia, unilateral paresthesia, and speech disorders. The pain is commonly limited to the head, but it may include the face and even the neck. The duration of attacks is from a few hours to several days and may vary in intensity from a mild dull ache to one of severe intensity. Often other members of the family have similar headaches."<sup>(1)</sup>

Among the types of migraine which have been described according to symptoms or etiologic factors are common migraine (one-sided headache or hemicrania); ophthalmic or "classic" migraine; ophthalmoplegic migraine in which ophthalmoplegia is essential to the diagnosis; and facial, abdominal, allergic, senile migraine, and the like.

### *Ophthalmic Migraine*

The symptoms of ophthalmic migraine vary within wide limits. Certain purely subjective characteristics of the disorder will be considered now.

#### *Abnormal visual sensations*

Sufferers from migraine describe disturbances of vision which characteristically precede the headache. Such sensations may be the predominant feature of each attack, or they may be so unimpressive that the victim recalls having experienced them only when carefully questioned. In some individuals the headaches may be so mild that only the subjective ocular sensations are described.

Three terms are used to designate these visual sensations. Although they are often used interchangeably, the eponym "scintillating scotomas" is most commonly employed. As the name implies, scintillating scotomas are characterized by blurring of vision, associated with a scotoma and flashing or shimmering lights. Fortification spectrum indicates zig-zag sensations of lights,

white or colored, forming a figure, often incomplete. Teichopsia indicates the appearance of shimmering colored lights. Associated with these phenomena is blurring of vision, usually not sufficient to prevent reading. The sensations characteristically disappear when the headache becomes pronounced—that is, they persist only for a matter of minutes in a majority of cases.

The origin of these visual abnormalities is not understood. It seems probable that they originate in the visual cortex, and are accounted for by cerebral anoxia, associated with arterial spasm. The rate of shimmer, 10 to the second, approximates that of the alpha X waves of the electroencephalographic activity reading from the occipital cortex. Unilateral scintillating scotomas have been described, suggesting in some instances that they may originate at the retinal level.

#### *Loss of vision*

Loss of vision varies within wide limits and in a great majority of cases is transitory, occurring before the headache becomes well established. Though it is usually difficult to map out a scotoma with the characteristic scintillations, in many instances one is present. Since ability to read is retained as a rule, the scotoma must usually be either of slight density or just off the point of fixation.

Very rarely, total bilateral loss of vision ushers in the migraine headache. In such an instance a bilateral hemianopsia is present. In one such case with which I am familiar, the phenomenon persisted for five minutes, and only afterwards was it realized that minimal subjective ocular symptoms had occurred previously. During the following twenty-five years many attacks of scintillating scotomas occurred; but there was never total bilateral loss of vision and, up to the present, the headaches have been too slight to interfere with work in any way. Similar cases of transient unilateral loss of vision have been described, in which instances there must have been arteriospasm affecting the central retinal artery.

In migraine there is no relationship between the degree of the visual loss and the severity of the headache.

Homonymous field defects characterize a minority of cases. In most instances these defects occur as a transitory phenomenon, although they may persist for days, weeks or months, and in some instances are perma-

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ment. I have observed permanent hemianopic defects usually as incomplete homonymous quadrantanopsia. When field defects persist—and certainly when they are associated with a transient hemiplegia or, what occurs more often, a monoplegia—diagnosis is difficult. In only a small minority of cases is the entire half-field of vision lost. In a single case which has come to my attention, the field defect—originally a quadrantanopsia—gradually improved, until only a small homonymous sector defect remained in the upper fields. In all such cases of field loss repeated transitory loss of fields preceded the attack. Dandy<sup>(2)</sup> observed a permanent bilateral hemianopsia, with a small central field of vision remaining. Butler<sup>(3)</sup> has described transient bitemporal hemianopsia associated with polyuria and polydipsia. Such occurrences must be rare indeed. Central scotomas which have persisted for long periods have been described, but I have not observed such cases.

#### *Visual imagery*

I have had experience with several cases of visual imagery associated with migraine, one of which merits mention. A middle-aged minister had had migraine for many years. He had experienced transient hemianopsia on many occasions and finally a homonymous quadrantanopsia which persisted. Then, from time to time, in the blind half-fields, he saw moving about large numbers of skunks, most of which had their tails cocked in the "ready" position.

Visual imagery is almost invariably, in these cases, referred to the side of the scotoma. Such imagery suggests involvement extending forward from the visual cortex. This is based on the belief that the unformed images of scintillating scotomas are due to cortical interference, as is usually the case with tumors involving the occipital cortex; tumors in the temporal lobe are prone to produce formed images.

#### *Diplopia*

Many migraine sufferers have reported diplopia, either vertical or lateral, occurring regularly during an attack of migraine. The explanation for the disorder is not clear. Duke-Elder<sup>(4)</sup>, observing that vertical diplopia associated with ophthalmic migraine does not exhibit torsion of the false image, suggested it might be supranuclear in its origin. He described torsion as characterizing the false image in ophthalmoplegic migraine, where the paralysis is due to involvement of

the peripheral nerve. Manifest palsy—excepting slight ptosis—never accompanies ophthalmic migraine, so far as I know. The diplopia of ophthalmic migraine is always of short duration. Furthermore, since attacks of classic ophthalmic migraine are occasionally followed by equally typical attacks of ophthalmoplegic migraine, the nature of the diplopia in the ophthalmic variety must at the present remain mysterious.

#### *Photophobia*

This is a prominent symptom in a majority of cases, and there is no established reason for its occurrence. From the work of Eckardt, McLean and Goodell<sup>(5)</sup> it would seem that the entire sensory trigeminal mechanism is involved in some manner when this symptom is present.

#### *The fundus picture*

Both widening and narrowing of the retinal arteries, as well as venous engorgement, have been described. While I personally have not seen such changes during attacks of migraine, I have no doubt that they occur in a minority of cases. Retinal hemorrhages, macular edema, and localized spasm have been observed.

In a vast majority of cases the pupils remain equal in size, and respond promptly to light. Rarely, some pupillary dilation is seen on the side of the headache. Such a slight pupillary change does not invalidate a diagnosis of ophthalmic migraine. It does suggest an element of ophthalmoplegic migraine; but, as has already been remarked, repeated attacks of ophthalmic migraine are occasionally followed by attacks of ophthalmoplegic migraine.

#### *Other ocular findings*

Swelling of the eyelids, conjunctival hemorrhages and corneal haziness have been seen occasionally. It is difficult to correlate such changes with migraine except on the basis of vascular activity, which, indeed, underlies our entire concept of the disorder. Bizarre symptoms may occur elsewhere in the body, as in the case of a patient of mine who invariably had swelling of one hand or the other as a prodrome to an attack.

#### *Ophthalmoplegic Migraine*

Some authorities consider ophthalmoplegic migraine as a totally different entity from ophthalmic migraine. This viewpoint is unsound, for, as already noted, attacks of oph-



thalmic migraine may be superseded by attacks of the ophthalmoplegic variety. In the latter, paresis or paralysis of a muscle is vital to the diagnosis. The paralysis, which usually is of the third nerve, is always of the peripheral type. In our experience and that of others, the paralysis has invariably been unilateral. Although I have seen only cases that were characterized by paralysis of the third nerve—and these are undoubtedly most common—paralysis of the sixth and fourth nerves, also usually unilateral, has been described. Paresis of more than one nerve has rarely been described. In my experience, the condition is more common in children and young adults than in the older people.

Bramwell<sup>(6)</sup> suggested that aneurysms might well produce ophthalmoplegic migraine; however, I have rarely encountered migraine of any type in patients who had had aneurysms. We must conclude that aneurysms, either saccular or of the fusiform dilation type, are infrequently responsible for ophthalmoplegic migraine.

#### *The Ophthalmologist's Role in the Treatment of Headache*

Ophthalmologists are fortunate in being able both to diagnose and treat many cases of headache. Eyestrain is a frequent cause of headache. The mechanism which underlies headaches due to this cause is more difficult to visualize than the pain resulting from changes in the size of the cranial vessels. Some ophthalmologists have criticized the term "eyestrain," but actually the term has much to commend it. At least it is vague enough to cover much of our lack of knowledge concerning the condition.

Headaches which originate in eyestrain and are associated with errors of refraction or muscle imbalance, follow a pattern. Although the relationship between the use of the eyes and the development of such headaches may not be obvious, skilled questioning will usually reveal that such a relationship exists. It has always been difficult for me to believe that an individual who retires at night feeling fit should awaken with a headache due to eyestrain.

Eye exercises have been prescribed in some instances, but I have had no experience in such treatment for headache or eyestrain.

Although a few years ago it was popular to attribute eyestrain to retinal size differences, aniseikonia has received increasingly less attention recently.

It is axiomatic that treatment should commence after the diagnosis has been made. Many headache sufferers first consult the ophthalmologist. There can be no question that their troubles are his primary responsibility. Does the ophthalmologist have any duty to these individuals other than recording his ocular findings and prescribing proper lenses when these are indicated? Should the responsibility for management of the case be shifted to some practitioner who has a particular interest in the headache problem, or should the ophthalmologist seek the help he feels is necessary and continue in charge of the case?

It seems to me that the ophthalmologist should accept responsibility for all patients who come to him for advice. Thus he may learn to handle properly a large number of the problems related to headache that confront him. For example, in regard to ophthalmic migraine, a thorough knowledge of the symptoms and signs reveals that the keystone to success in most cases is simply understanding the problem, and gaining the patient's cooperation in adjusting stresses and strains. This applies in post-traumatic headaches. Finally, the treatment of headaches calls for combined efforts in so many instances that we should not try to cut short our possible contribution as regards both diagnosis and treatment.

#### *Summary*

The ocular symptoms of migraine have been outlined, and the ophthalmologist's role in the treatment of headache has been discussed.

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## INTRACTABLE PAIN IN THE NECK AND UPPER EXTREMITIES WITH PARTICULAR REFERENCE TO PROTRUSION OF CERVICAL DISKS

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Pain in the neck and upper extremities is a common complaint. Before satisfactory treatment can be carried out, the attending physician must determine the etiologic factor and the pathologic process. To determine these factors may require extensive study and a considerable period of time. Examinations in addition to the ordinary medical, orthopedic, neurologic, and radiologic studies may be required. The usual tests of blood and urine, of course, should be made.

It is not uncommon for a person to have soreness in the neck following exposure to drafts. This condition is probably the result of a myositis, and will usually respond to the exhibition of the salicylates and local heat with or without gentle massage.

Some of the more common chronic conditions which result in recurrent or intermittent intractable pain are the scalene syndrome, with or without cervical ribs; the hyperabduction syndrome; tumors of the cervical portion of the spinal cord and its nerve roots; cervical arthritis; subdeltoid bursitis; brachial neuritis; fractures and dislocations of the cervical part of the spinal column; and a more and more frequently encountered factor—protrusion of one of the intervertebral disks in the cervical region, particularly those in the lower part of the cervical—namely, the fifth, sixth, and seventh cervical intervertebral disks.

### *Scalene Syndrome, With or Without Cervical Ribs*

According to Adson and Coffey<sup>(1)</sup>, the incidence of cervical ribs is about 0.05 of 1 per cent. Probably not more than 10 per cent of the patients presenting roentgenologic evidence of this condition have symptoms severe enough to warrant radical surgical treatment.

#### *Etiology*

Prior to 1927, when Adson and Coffey made an historical report on the cervical rib

syndrome, the rib itself was considered the most important etiologic structure in this syndrome. At that time the authors called attention to the important role of the scalenus anticus muscle in the production of the nervous and vascular symptoms that were formerly attributed to pressure by the cervical rib. Even when symptoms are produced in persons having cervical ribs, they do not ordinarily appear until the patient reaches adult life. This is probably due to the sinking of the shoulder girdle as the patient matures and the muscles of the shoulder girdle lose some of their normal youthful tone.

#### *Symptoms*

The symptoms that ordinarily compose the scalenus anticus syndrome, whether cervical ribs are present or not, are usually divisible into those due to irritation and compression of the brachial plexus, and those secondary to disturbed functioning of the subclavian artery and its peripheral branches. There may be merely pain or paresthesia in the upper extremity, or the symptoms may be so severe as to result in gangrene. The pain, however, rarely if ever resembles that which is caused by compression of a nerve root within the spinal canal. It rarely has root characteristics—that is, aggravation by coughing, sneezing, or straining at stool. In those patients presenting vascular disturbances principally, the symptoms may simulate those of Raynaud's disease, though they are not likely to progress to such an extent as with severe Raynaud's disease. Intermittent obstruction of the subclavian vein associated with pressure from the scalenus anticus muscle, either with or without a cervical rib, is considered a rare condition, but the author has had occasion to operate with excellent results<sup>(2)</sup> on several such patients.

#### *Diagnosis*

Every patient presenting symptoms or signs of irritation of the brachial plexus or obstruction of the subclavian artery or subclavian vein should be examined for the possibility of a scalenus anticus syndrome. This examination should include careful palpation of the supraclavicular fossa to determine the presence or absence of abnormal structures and any enlargement of the subclavian artery, and dilatation of the superficial veins. The skin and muscles of the upper extremity should be carefully examined for loss of sensation, atrophy, and weakness of muscles.

The radial pulse should be palpated and

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the two sides compared to see if there is any difference in volume, since the scalene syndrome is commonly, though not always, unilateral. After comparison of the pulse on the two sides, the patient, while holding the arm dependent, should be told to turn his face toward the side being examined, take a deep breath and hold it, while hyperextending the neck (Adson maneuver). If the scalene syndrome is present, the pulse volume on the side being examined will be much decreased or completely obliterated, and usually the patient's symptoms will be reproduced.

In addition to the physical and neurologic examinations, roentgenographic examination of the cervical portion of the spinal column should be carried out to determine whether cervical ribs are present, and whether the transverse processes of the cervical vertebrae are abnormally large. The upper thoracic ribs, particularly the first two, should be noted for any malformation, maldevelopment, or malposition (fig. 1).

#### Treatment

The conservative treatment of the scalene syndrome is physiotherapy in the form of local heat and massage, and exercises to strengthen the muscles about the shoulder girdle and so prevent sagging of the upper part of the chest. The scalene syndrome is more commonly seen in women than in men, and those women with large pendulous breasts should be instructed to use an adequate support. If the pain or circulatory disturbances are severe, or if they have resulted in loss of sensation, atrophy or marked diminution of circulation in the upper extremity, the anterior scalene muscle should be divided where it is attached to the first thoracic rib. If a cervical rib is present and the pressure on the subclavian artery and brachial plexus is not relieved by division of the anterior scalene muscle, the cervical rib also should be removed. In case of pronounced reduction in circulation, it is at times advisable also to combine sympathectomy with scalenotomy in order to allow a maximal amount of blood to reach the involved extremity.

In carefully selected cases, when the operative procedure is properly adapted to the particular case, the results are excellent. However, in patients with borderline conditions or functional complaints, the results may not be good. As stated previously, all patients with cervical ribs do not require



Fig. 1. Drawing showing anomalous first rib on left side, with an aneurysm of the subclavian artery distal to the tight anterior scalene muscle. The patient complained of pain and paresthesias in the left arm. Adson's maneuver gave positive results. The pain and paresthesias were relieved after division of the anterior scalene muscle. The patient was a woman 58 years of age.

treatment, for most cervical ribs are symptomless.

#### Costoclavicular Syndrome

Owing to the fact that, in the past, many patients with obscure symptoms referable to the upper extremities have been operated on for cervical rib or the scalene syndrome without benefit, a continuous study of such cases has been carried out in many parts of the world, resulting in a much better understanding of the problems involved. Falconer and Weddell<sup>(3)</sup>, in 1943, reported 3 cases of intermittent compression of the subclavian artery and vein between the clavicle and the first thoracic rib. They referred to the syndrome which they described as the *costoclavicular syndrome*, or compression of the subclavian artery or vein, and discussed it in relation to the scalenus anticus syndrome. By comparing their patients with a large series of so-called normal individuals, they found that if the shoulders are braced backward and downward, the space between the clavicle and the first thoracic rib is often narrowed or reduced, causing the radial pulse to be obliterated (fig. 2). Although a high percentage of "normal" individuals were able to obliterate the radial pulse by bracing the shoulders downward and backward, when the results of this test were found to be positive in a patient having marked disturbance of the function of the subclavian artery and vein, the authors were able to show that this was associated usually with some abnormality of the thoracic inlet, either an abnormal

placement of the first thoracic rib on the side of the involvement or some other unusual condition. In one case, roentgenologic examination disclosed that the inlet formed by the first thoracic rib was asymmetrical, that the first rib appeared shorter and less oblique than usual on the side of involvement, and that the anterior end of that rib, with the medial end of the clavicle, was on a high level. In one case the symptoms were severe enough to necessitate removal of a section of the first thoracic rib from beneath the subclavian artery in order to decompress the artery and brachial plexus adequately. In one patient the symptoms were present only when the soldier was marching or carrying a heavy pack. Since it was possible for him to be placed in some other work, surgical treatment was not required in his case.

Falconer and Weddell<sup>(3)</sup> estimated that in about 62 per cent of normal persons examined, bilateral costoclavicular compression of the subclavian vessels could be demonstrated. One must be on his guard, therefore, not to advise operation on the basis of this test alone. In those patients who demonstrate symptoms and signs which are explainable on the basis of costoclavicular compression, a course of conservative therapy should be carried out—that is, the patient should avoid carrying a heavy pack on his shoulders, and he should strengthen the muscles by exercise to pull the shoulders away from the direction which produced his symptoms. If the patient's condition should be intractable, and particularly if features of obliterative arterial disease should be present when he is first seen, the authors advised exploration of the supraclavicular fossa. At operation the exact site of the compression should be determined. This, they stated, is best done with the patient under local anesthesia, a procedure which I have found very useful in operating on patients with the scalene syndrome, whether with or without cervical ribs. After the pathologic factor has been demonstrated, if a portion of the rib is to be removed, the patient may be put to sleep either with an inhalation or an intravenous anesthetic.

#### *Brachialgia Statica Paresthetica*

Wartenberg<sup>(4)</sup> of San Francisco, as a result of his experience with patients complaining of paresthesia—painful sensations in the fingers, hands and arms, has worked out a syndrome which he called *brachialgia statica*

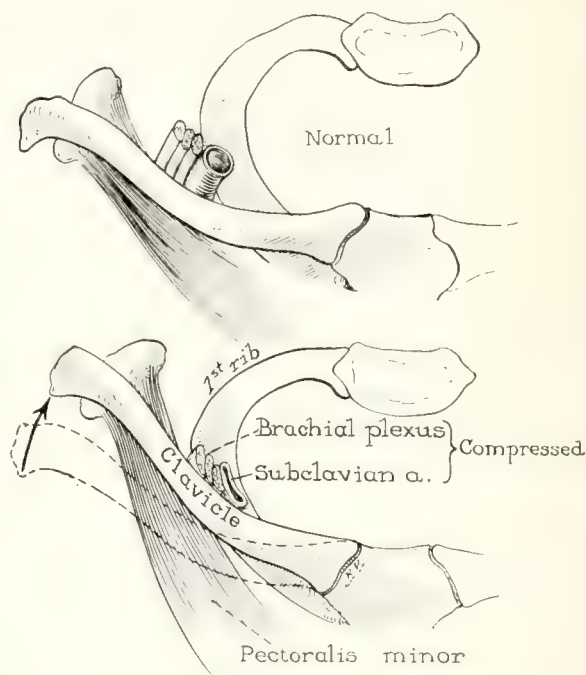


Fig. 2. Drawings to show the normal relationship of the brachial plexus and subclavian artery to the clavicle and first rib and what happens in the costoclavicular syndrome of Falconer and Weddell.

*paresthetica*, or nocturnal dysesthesia of the arm. The leading features of this syndrome are: (1) transient paresthesia, anesthesia, or pain in the upper extremity, felt only at night while the patient is recumbent; (2) absence of any permanent objective signs—neurologic, orthopedic, or internal—even after long duration of the condition; and (3) a long benign course, self-limited and without complications.

Wartenberg observed that the complaints of his patients with this condition—about 30 or more—were similar to those with cervical ribs, especially with regard to paresthesia in the ulnar nerve distribution of the upper extremity. The main differentiating factor was that patients with this syndrome always have their symptoms at night, whereas those with the scalene syndrome sometimes have nocturnal symptoms.

Wartenberg observed further that none of his patients had shown a cervical rib on roentgenologic examination. The painful sensations of which the patient complains not only appear after he has assumed a recumbent position, but after he has been in this position for several hours and immobilized his arm during deep sleep. The pains and paresthesias disappear quickly on awakening.



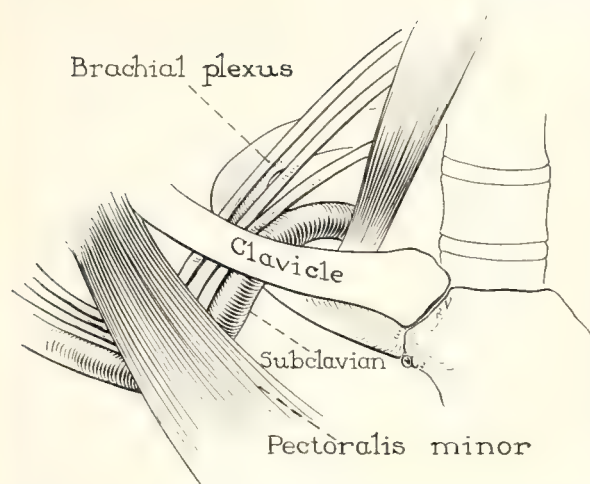


Fig. 3. Drawing to show how the brachial plexus and subclavian artery may be compressed beneath the pectoralis minor muscle when the arm is abducted—the neurovascular syndrome of Wright.

"Even if the nocturnal manifestations continue for years," Wartenberg stated, "they do not produce any permanent changes." His explanation for the painful condition is that relaxation of the muscles of the shoulder girdle during sleep results in compression of the brachial plexus. For treatment he recommends a hard bed and a low pillow, plus exercises to strengthen the muscles which elevate the shoulders. The treatment should be carried out regularly for months. He adds that in some cases it is justifiable to divide the scalenus anticus muscle. This statement, of course, makes it obvious that it will be difficult for those seeing few such patients to differentiate these cases from those of the scalene and costoclavicular syndromes.

#### *Hyperabduction Syndrome*

In 1945 Wright<sup>(5)</sup> described what he called the neurovascular syndrome produced by hyperabduction of the arms and marked by paresthesia, numbness, and pain in the fingers and hands. The symptoms were produced by hyperabduction of the arm on the side of involvement, and were relieved by adduction of the involved arm. In some cases gangrene resulted from the marked interference with circulation.

Radiologic examination in such cases is usually negative—that is, no cervical rib is present, and the upper thoracic ribs appear normal. This condition Wright found only in young soldiers in excellent physical condition. He pointed out that on suspecting this

condition in a patient, one must bear in mind that abduction of either arm or both arms results in obliteration of the pulse on the involved side in 80 per cent of the so-called normal individuals thus tested. The point of constriction of the subclavian vessels and brachial plexus, according to Wright, may be (1) the point at which the axillary-subclavian vessels and the trunks of the brachial plexus pass posterior to the pectoralis minor muscle (fig. 3) and beneath the coracoid process; or (2) the point at which the subclavian vessels and the trunks of the plexus pass between the clavicle and the first rib (this would be the costoclavicular syndrome of Falconer and Weddell referred to above).

According to Wright, the causes of the hyperabduction syndrome are (1) prolonged sleep in a supine position with the arms hyperabducted; (2) aggravation of symptoms by trauma, and (3) occupational hyperabduction such as painting a ceiling. The patient should be told to sleep with the arms in a safe position. If the symptoms are occupational, he should be advised to change his work. Wright has stated further that in some cases, particularly when the costoclavicular syndrome is present, surgical treatment such as that discussed earlier should be employed.

#### *Tumors of the Cervical Portion of the Spinal Cord and Its Nerve Roots*

Neoplasms may arise either within the spinal cord itself, from the membranes surrounding the cord, from the nerve roots leaving or coming to the cord, or from the vertebral column and adjacent structures. The tumors which are most likely to become confused with the other conditions discussed in this paper are those involving the nerve roots themselves or the meninges. These are the tumors which are likely to give either neuralgia-like or boring pain that is prone to be nocturnal in occurrence, or typical nerve root pain—that is, pain aggravated by coughing, sneezing, or straining at stool. The pain is very likely, if the tumor arises in the lower part of the cervical region of the spinal canal, to be referred along the upper extremity, partially or even to the tips of the fingers.

Those neoplasms arising in the higher portion of the cervical canal may produce pain that extends along the occipital nerve to the posterior portion of the skull. Such new growths may be present for a considerable

time before gross neurologic changes occur, since the more common tumors are slow-growing meningiomas and neurofibromas. When these patients are first seen, the results of neurologic examination, even including examination of the spinal fluid, may be within normal limits. While undergoing conservative treatment, however, such patients should be re-examined periodically to determine whether or not neurologic signs have developed, or whether the condition is getting gradually worse. If dermatome hypalgesia, sensory loss, or motor loss develops, the possibility of an intraspinal neoplasm should be considered, and a diagnostic lumbar puncture, including the Queckenstedt test, should be performed. Though there may be no disturbance of the hydrodynamics as determined by the Queckenstedt test, usually there is a slight or marked increase in the total protein of the spinal fluid, the total protein usually being higher in the case of neurofibroma than in the case of meningioma. A tumor involving the spinal cord or nerve roots should be suspected, particularly if both arms are involved, if a Babinski sign is present in either or both feet, or if there is any evidence of involvement of the long tracts going to or coming from the lower extremities. If a tumor of the spinal cord is located, it should be removed through a laminectomy wound.

#### *Cervical Arthritis*

Cervical arthritis has been credited with many of the pains and aches which occur in the region of the neck and arms; however, it seems to me that cervical arthritis is a rather rare cause of pain referred downward into either upper extremity. Many people, on roentgenologic examination of the cervical portion of the spinal column, exhibit marked changes in the bones, with pronounced narrowing of the intervertebral spaces and much hypertrophic change. Many of the patients with the most marked changes have no symptoms referable to the neck or brachial plexus. One should, therefore, be loath to explain severe intractable pain in the neck or upper extremity on the basis of a radiologic diagnosis of cervical arthritis. The more common causes should be sought for and eliminated before resorting to such a diagnosis.

#### *Subdeltoid Bursitis*

A not infrequent cause of severe pain in the shoulder and upper extremity is sub-

deltoid bursitis. In acute cases, the patient may have considerable disturbance of the function of the upper extremity, and I have seen patients with decided weakness and extensive muscular atrophy of the involved extremity. However, the subdeltoid bursa is usually tender on local palpation, and the condition responds to conservative treatment administered to the bursa. Sometimes when the bursa becomes calcified, it is necessary to extirpate it surgically.

#### *Brachial Neuritis and Neuralgia*

Brachial neuritis is a diagnosis that formerly was rather commonly made in cases of pain involving the upper extremity or the shoulder girdle. The pain often is lancinating in type and has many of the features which are recognized today as indicating involvement of the nerve roots, particularly when a protruding intervertebral disk is the cause. However, when pain is referred to the shoulder girdle and the upper extremity, one should consider the possibility of some metabolic disturbance — a poisoning from some noxious substance which might have an adverse effect on the brachial plexus.

Brachial neuralgia is associated with pain in the distribution of one or more nerves of the brachial plexus. On careful study the pain is often found to be due to some organic disease, such as pressure on the roots of the brachial plexus or direct pressure on the brachial plexus from a cervical rib, a scalenus anticus muscle, an aneurysm, or a tumor (fig. 1). If the etiologic factor cannot be determined when the patient presents such a complaint, such conservative measures as resting the extremity, avoiding motions which aggravate the pain, the administration of salicylates, and the use of local heat and possibly gentle massage, should be outlined. The patient should be kept under observation and examined periodically for abnormal changes such as the loss of a tendon reflex, the loss or diminution of sensation, or the weakening of any muscle or group of muscles.

#### *Fractures and Dislocations*

Fractures and dislocations of the cervical portion of the spinal column may result in pain referred into an extremity. Without a definite history of trauma this condition might be overlooked. The neck should be examined carefully for muscle spasm and for such abnormalities as wry neck or torticollis. The motions of the neck should be checked carefully, so that if a fracture or



dislocation is present no further harm will be done to vital structures—namely, the cervical cord and nerve roots. Although ordinary anteroposterior and lateral roentgenographic views will usually disclose a fracture or dislocation, sometimes special techniques such as tomography are required; roentgenograms of the odontoid region through the open mouth are sometimes necessary before the true lesion can be demonstrated.

If a fracture or dislocation is present, the most conservative treatment is traction with either the head halter, the Crutchfield tongs, or some modification thereof. All undue motion of the cervical part of the spinal column should be avoided, and fixation should be carried out until healing has occurred. Sometimes it is necessary to perform a laminectomy for purposes of decompression, or a bone-graft fusion opposite the site of fracture or dislocation in order to prevent slipping of the fragments with further damage to the cord or nerve roots.

#### *Protruded Intervertebral Disks in the Cervical Region of the Spinal Column*

Although protrusions of intervertebral disks in the lumbar region have come to be recognized as a well-known etiologic and pathologic factor in intractable low-back and sciatic pain<sup>(6)</sup>, and although the treatment of this condition, both conservative and operative, is fairly well understood, the protrusions of disks in the upper or cervical region of the spinal canal are often overlooked. There are good reasons why this region has been handled with kid gloves, so to speak. One is that, owing to the cervical enlargement for the innervation of the brachial plexus, operations in the cervical region of the spinal canal cannot be carried out with the same safety and assurance that we have come to expect from operations in the lumbar region<sup>(7)</sup>. So well known is the syndrome of protruded lumbar disk that orthopedic surgeons, and even some general surgeons with no particular training for operations on the spinal cord or its nerve roots, have felt qualified to remove the protruded fragment of a lumbar disk which has resulted in intractable low-back and sciatic pain. Protrusions occur in the thoracic region also, and even neurosurgeons are loath, at the present time, to undertake operations for protrusions in this region, because of the danger of causing irreparable damage to the

spinal cord. The author has reported a series of operations for this condition<sup>(8)</sup>.

As far as reports go and as far as our experience at the Mayo Clinic is concerned, protrusion of cervical disks does not occur as frequently as protrusion in the lumbar region. Walsh and I<sup>(9)</sup> reported in 1940, that out of a series of 500 operations for protruded intervertebral disks, approximately 96 per cent of the protrusions were in the lumbar region. That left approximately 4 per cent of the protrusions in the cervical and thoracic regions combined. Since then our experience with protruded intervertebral disks in all regions of the spinal column has increased; and, as we have learned more about the symptoms and signs of protruding cervical disks, our incidence of operative intervention for this condition has increased to approximately 10 per cent.

#### *Symptoms*

The lateral protrusion of a cervical disk—and this is the most satisfactory type to treat—produces nerve root pain—that is, pain extending along the course of the nerve root through the peripheral nerve, taking its origin therefrom, and pain which is aggravated by coughing, sneezing, or straining. Many patients are awakened by pain in the neck or upper extremities at night, particularly during the early morning hours, and often obtain relief by sitting up or walking the floor. The patient frequently complains of numbness or paresthesia in the thumb or fingers. Since protrusion of a cervical disk is most common at the fifth, sixth and seventh cervical interspaces, the pain or paresthesia is usually referred to the thumb or index finger, to the middle three fingers, or to the little and ring fingers.

The fact that there are only seven cervical vertebrae, with eight cervical nerve roots, leads to some confusion regarding the symptomatology and the site of the protruding disk. A good rule in diagnosing and localizing a protruded disk in the cervical region is that if the pain or paresthesia is in the thumb and index finger, the fifth cervical disk is likely to be compressing the sixth cervical root. If the middle fingers are involved, usually it is the sixth disk compressing the seventh root. Protrusion of the seventh disk involves the eighth cervical root and the symptoms are referred to the ulnar side of the hand—that is, to the little and ring fingers. These rules do not always hold, of course, because, with the so-called prefixed

or postfixed brachial plexus there may be a variation in the formation of the nerve roots and the reference of the pain along the course of the involved nerve.

If the protrusion of the cervical disk is midline—and more and more such cases are being reported—the symptoms and signs may be those of a neoplasm of the spinal cord. On the other hand, many cases of degenerative disease caused by midline protrusion of a cervical disk are being reported.

I, for one, feel that there has been too much enthusiasm in regard to this matter. Although cases which have gone for a long time under a clinical diagnosis of syringomyelia, multiple sclerosis, primary lateral sclerosis, and similar conditions have been proved to be due to protrusion of an intervertebral disk, one must be cautious in making a diagnosis of protruded cervical disk mainly on roentgenographic evidence, when the clinical findings indicate one of the degenerative lesions of the spinal cord.

A patient with a history of pain referred from the region of the neck along an upper extremity (and in the case of a protruded intervertebral disk the pain is usually limited to one arm) should be examined carefully for signs of pressure on a nerve root in the cervical region. A patient with pressure on a nerve root usually holds his neck rather stiffly and avoids large ranges of motion. The muscles of the neck are likely to be in spasm, and there is a loss of the normal cervical curvature (fig. 4a).

As in protrusion in the lumbar region, hyperextension of the part is frequently very painful and often reproduces extension of pain along the nerve root involved. Hyperextension of the cervical portion of the spinal column should be carried out cautiously in a patient suspected of having protrusion of a cervical disk. Lateral and anterior flexion likewise may be painful and greatly reduced. These physical signs indicate involvement of a nerve root.

There may or may not be weakness of the hand grasp or of individual or groups of muscles of the arm. There may or may not be sensory changes. If skin sensitivity is diminished, it is likely to be slight and will have to be searched for rather carefully. The tendon reflexes of the involved arm may be reduced or absent, those of the biceps and triceps being most important.

A rule of thumb regarding involvement of the tendon reflexes is that with the sixth

root lesions due to protrusion of the fifth cervical disk the biceps reflex often is reduced or absent. Lesions involving the seventh nerve root may affect the biceps and triceps reflexes either together or alone. Lesions that involve the eighth cervical root result frequently in a diminution or absence of the triceps reflex alone. Again, variations in the formation of the brachial plexus may militate against the validity of these statements.

#### *Diagnostic aids*

Roentgenologic examination of the cervical portion of the spinal column is of great importance, and probably even of more importance in establishing a diagnosis of protruded cervical disk than is the corresponding examination in the lumbar region for the suspected protrusion of a lumbar disk. The roentgenogram, particularly the lateral view, will usually show a diminution of the intervertebral space at the site of protrusion of a cervical disk. Likewise the lateral view usually shows an absence of the normal curvature of the spinal column—that is, in acute protrusion of a cervical disk, the cervical portion usually assumes an almost straight outline. Slight hypertrophic changes involving the vertebral bodies adjacent to the narrowed interspace may also be evident. One may find in addition to the narrowing of the interspace, which corresponds to the suspected site as determined by the history and physical and neurologic findings, an associated hypertrophic arthritis with a degeneration of a disk which is probably not related to the protrusion. The cervical roentgenogram should be studied carefully to exclude other lesions such as neoplasms.

In many neurologic conditions an examination of the cerebrospinal fluid is of great value, and in some of the conditions involving the brain, spinal cord and nerve roots, the spinal fluid findings are diagnostic. In a case of suspected protrusion of a cervical disk, a spinal puncture should be performed; the Queckenstedt test should be carried out to determine whether there is any disturbance of the hydrodynamics along the spinal cord; and a specimen of fluid, usually 5 to 10 cc., should be removed and sent to the laboratory for examination.

The most important laboratory examination as far as protrusion of a cervical disk is concerned is the determination of the pro-



tein content of the spinal fluid. Our laboratory staff considers a total protein content of 40 mg. per 100 cc. as being within normal limits; however, a total protein content of 40 mg. is, in my experience, slightly higher than is usually found in patients without a space-taking lesion.

The examination of the cerebrospinal fluid during a period of acute pain in suspected cases of protruded cervical disk, usually reveals a protein content ranging from approximately 60 to 70 or even 80 mg. Rarely, in cases of complete subarachnoid block caused by the disk, it may be as high as several hundred milligrams. In one case that I remember, in which there was a complete subarachnoid block and in which the patient presented the symptoms and signs of primary lateral sclerosis, a total protein content of 400 mg. per 100 cc. was determined. If the patient with a protruded cervical disk is not in the acute phase but is having some pain or paresthesia, and if neurologic signs are present, a total protein content of less than 40 mg. per 100 cc. should not militate against the diagnosis of a protruded cervical disk.

The number and type of cells within the spinal fluid should be determined, and if there should be leukocytes or lymphocytes in excess the possibility of an inflammatory lesion involving either the spinal cord, the nerve roots, or the meninges should be considered.

Most authors\* recommend the use of a contrast medium, usually an opaque oil such as lipiodol or more commonly pantopaque, for visualization of the spinal canal to determine the presence or absence of a space-taking lesion. The oil is injected in the lumbar region, and the patient undergoes a fluoroscopic examination. This test should be done by a competent roentgenologist who is experienced in the observation of the flow of a column of opaque oil in the spinal subarachnoid space<sup>(10)</sup>. If a defect is found in the cervical region at a site that would explain the patient's symptoms and signs, and if the defect is of the type ordinarily seen in the case of a protruded intervertebral disk, the test is of great help and the diagnosis can be said to be confirmed. After the fluoroscopic observation of the column of fluid, roentgenograms should be made for perma-

nent record and for the use of the surgeon in removing the disk. After the roentgenograms are made, it is the usual practice to remove the opaque oil from the subarachnoid space. In the case of obstructive lesions sometimes the oil is left until the time of the laminectomy and removed at that time.

When the diagnosis has been made, one can determine whether to treat the patient conservatively or by surgical means. It seems to me that if conservative treatment is to be carried out, myelography should be postponed until the patient is having sufficient trouble to justify an operation, or until it has been demonstrated that conservative treatment is not going to afford symptomatic relief.

#### *Conservative treatment*

The conservative treatment of protruded intervertebral disk or of symptoms and signs of involvement of one or more nerve roots in the cervical region consists of the application of cervical traction. There are many ways of doing this. Traction may be administered by means of a halter, under the direction of a physician or physiotherapist. A homemade halter may be provided and the patient instructed in using it in his own bed<sup>(11)</sup>. Traction can be applied at night when the patient retires, and he can sleep in the apparatus; or, if the pain is severe, it may be necessary to apply continuous traction day and night.

Some patients benefit from the application of heat to the muscles of the neck, particularly those posteriorly, and some feel better after gentle massage of these muscles.

Patients with a moderate amount of pain should be given analgesics such as acetylsalicylic acid, while others require codeine or morphine. It is unwise, it seems to me, to allow a patient suspected of having a protruded intervertebral disk to be given an opiate for any prolonged period of time, because of the danger of addiction. It seems better, if the patient's physical condition will permit, to proceed with the necessary diagnostic procedures, including exploration of the cervical canal.

#### *Surgical treatment*

The operation for the removal of a protruded cervical disk can be performed under local paravertebral block, after the preliminary administration of an analgesic or hypnotic drug. It is my practice to perform the

\*I rarely use myelography for cervical lesions, but depend instead on the other examinations described for diagnosis.

operation under general intratracheal anesthesia. By the time the patient has come to operative treatment he has had considerable pain, and he does not want the additional pain of a paravertebral block. The manipulation of the nerve root which is usually necessary in removing the protruded disk is painful, and often results in muscular twitching and jerking of the arm which might be alarming to the patient. Under a general anesthesia the procedure can be carried out without pain.

The position of the patient on the table deserves some consideration. The operation can be performed probably with more ease with the patient in the upright position such as is commonly used for operations on the posterior fossa of the cranium. It seems to me, however, that there is slightly increased risk in operating on cervical disks in this position. The extradural veins are usually large and engorged in the region of a protruded disk, and there is slight risk of air embolism or difficulty in controlling the veins. There is always the potential danger of cerebral ischemia with resultant visual difficulty, particularly if the patient's blood pressure should drop markedly.

The operation may be carried out with the patient in the lateral decubitus position (I have performed cervical laminectomy with the patient in this position more than once). I prefer to have the patient in the face-down cerebellar position—that is, with the face resting in a well padded horseshoe and the neck on slight stretch, so that the spinous processes stand out rather distinctly in the midline.

The operation of choice when approaching the intraspinal lesion is hemilaminectomy—that is, removal of the lamina or laminae only on one side of the spinal canal. However, there is no contraindication to doing a bilateral laminectomy with removal of spinous processes. This operation is indicated in cases of midline protrusion, or when the protruded disk is calcified and it is necessary to forego removal for fear of additional damage to the spinal cord. This operation also permits the surgeon to divide teeth of the dentate ligament in order to decompress the spinal cord fully and permit it to move posteriorly away from the midline irremovable lesion. In either a hemilaminectomy or a bilateral laminectomy the muscles should be stripped from the midline, subperiosteally. This prevents excess bleeding and permits quick an-

atomic and more secure closure of the wound. The operation should be limited to the site of the lesion, and no more bone should be removed than is essential for the removal of the lesion; adequate exposure, however, is essential.

In the removal of a protruded disk involving only one nerve root, most of the two adjacent laminae may be removed in order to expose the involved nerve root and to remove the protruded disk, which lies anterior to the nerve root. If the fragment is unusually large and extends toward the midline, it may be necessary to have more room to work, so that the cord will not be damaged when the fragment has to be rotated moderately to remove it from the anterior surface. There may be one large fragment or multiple small fragments. Care should be taken that no fragmented cartilage remains behind.

Ordinarily it is not necessary to open the dura mater. If, as stated before, the lesion is irremovable and maximal decompression is to be accomplished, the dura, as well as the arachnoid membrane, must be opened, so that several teeth of the dentate ligament in the region of the irremovable lesion can be divided, thus allowing the spinal cord to move away from the anterior compression.

It may be difficult to confirm the site of the protruded intervertebral disk after removal, especially when it has been necessary to remove two or three laminae in order to get adequate exposure. My practice is to place an ordinary hemostatic silver clip just posterior to the involved nerve root for post-operative roentgenographic confirmation of the location from which the protruded disk was removed. It is then easy to correlate the location of the lesion, found at operation, with the history and the physical, neurologic, and roentgenographic findings. This is significant because, in some cases, a diagnosis of protrusion at a particular level may be made clinically, and on exploration the protrusion may be found one space higher or lower. It is important, therefore, in speaking of the syndrome of the protruded disk and the findings which one is likely to encounter, to know the exact location at which the lesion presented itself (fig. 4b).

*Results:* If a patient is operated on during the acute phase—that is, while he has severe pain and disability—and a free-lying fragment of disk is found and removed without the necessity of undue traction or manip-





Fig. 4. (Case 1.) a. Lateral roentgenologic view of the cervical portion of the spinal column. Note the straightening of the lower portion of this part of the spinal column, the narrowing of the sixth intervertebral space, and the localized hypertrophic changes at the site of protrusion of the disk. b. Postoperative anteroposterior view, showing the silver clip placed at the sixth interspace at the time the protruded disk was removed. Inset. The protruded sixth cervical disk that was removed.

ulation of the nerve root, he can expect immediate relief on awakening from the anesthesia. In some cases, owing to the adherence of the fragments to the involved nerve root and the consequent manipulation required for removing the disk, there may be residual pain and discomfort for several days.

When there are hypertrophic ridges or a calcified protruded disk that cannot be removed, the improvement is likely to be slower and less dramatic than in the more clear-cut, typical protrusion. In some cases—particularly those of a large midline protrusion, and in patients who have experienced rather severe neurologic deficits before treatment—the period of convalescence may extend from a year to a year and a half, or even two years, before maximal improvement occurs. One should not be discouraged, therefore, if the immediate result is not brilliant. Even those patients who have had severe neurologic deficits may, over a period of months,

show rather marked and gratifying improvement. The following illustrative case reports may be helpful in the diagnosis of similar cases.

#### *Illustrative Cases*

##### *Protrusion of the sixth cervical disk*

**Case 1.** A man aged 36 years gave a history of pain in the right upper extremity of five months' duration. Fifteen or sixteen years before he had dislocated his right shoulder, and had been treated for five months for this condition. Eight years before coming to the Mayo Clinic he had been knocked unconscious in an automobile accident.

The patient stated that approximately five months before coming to us he had awakened one morning with a pain in the back of his right shoulder. The pain became worse during the next few days, and gradually involved the arm, forearm, and middle three fingers of the right hand. The pain, which had been fairly constant, was usually dull and aching, becoming severe at times, particularly at night. The patient had recently noticed slight weakness in the right upper extremity, being unable, for example, to use both hands equally well in holding or spreading out a newspaper. About once a week he had felt what he described as an "electric shock" sensation in the right arm. He believed that coughing, turning his head, and lying down aggravated

the pain, while sitting up tended to decrease it.

Two weeks before coming to the clinic the patient had been hospitalized for nine days. He had been given a thorough study, including a lumbar puncture. The spinal fluid was found to contain only 18 mg. of total protein per 100 cc. (that is important when compared to our findings). At the time of his examination at the clinic, the patient described the path of his pain as beginning in the region of the right scapula and extending over the point of the right shoulder, into the right arm, down the extensor surface of the forearm, and occasionally into the middle three fingers of the right hand.

Physical examination revealed slight limitation of spinal motions and complaint of pain on any motion of the cervical portion of the spinal column. Neurologic examination revealed slight weakness of the triceps and biceps muscles on the right side. Slight weakness of the flexors and extensors of the wrist, slight weakness of the hand grasp on the right side, and some atrophy of the muscles of the right arm were also noted. The right triceps reflex was moderately reduced in comparison with that of the left side. There was subjective hypesthesia over the second, third, and fourth fingers of the right hand. A scalenus anticus test on the right side was slightly positive.\*

The roentgenologic examination of the cervical part of the spinal column revealed narrowing of the sixth cervical interspace (fig. 4a). A diagnostic lumbar puncture was performed. The Queckenstedt test gave normal results—that is, there was no evidence of disturbance of the hydrodynamics of the spinal fluid. Examination of the spinal fluid revealed a total protein content of 150 mg. per 100 cc. There were 5 lymphocytes per cubic millimeter.

While undergoing examination, the patient had five cervical traction treatments without any relief of his pain. A diagnosis of protrusion of the sixth cervical disk with compression of the seventh cervical root on the right was made, and removal of the lesion was advised and carried out. With the patient in the face-down position, laminectomy was performed on the right side, and a very large, typical, free-lying protrusion of the sixth cervical disk, compressing the seventh cervical nerve root, was exposed and removed. A silver clip was placed at the site of removal, and a postoperative roentgenogram confirmed the location at the sixth cervical interspace (fig. 4b). The patient's convalescence was uneventful. He was dismissed from the hospital on the eleventh postoperative day, and from the clinic the following day, with instructions to convalesce for six weeks before returning to his former work as a restaurant employee.

#### *Protrusion of the seventh cervical disk*

**Case 2.** A 46 year old man who had been a patient at the clinic two years previously returned for treatment. At the previous visit his history had suggested the syndrome of Pancoast's tumor. Nodes were felt in the left supraclavicular region. A lesion of the left hilus was suspected, and bronchoscopic examination was carried out in the hope of making a diagnosis. A specimen for biopsy was taken, and secretions were aspirated from the left side of the bronchial tree for cytologic study. The tissue from the bronchus was inflammatory. The bronchial secretions and smears revealed no malignant cells.

One consultant who saw the patient at the time

\*It is not uncommon for a patient with a protrusion of a cervical disk to reveal a positive scalene maneuver. I have seen several patients who had had an anterior scalenotomy elsewhere without relief until the correct diagnosis of protruded disk was made and the offending fragment of protruded disk was removed. This mistake arises because the anterior scalene muscle, which receives its nerve supply from the brachial plexus, goes into spasm because of the irritation of a root of the brachial plexus. The spastic muscle then compresses the subclavian artery when the patient is tested by the Adson maneuver. Theoretically, a procaine block of the muscle would be of help in differentiating the two conditions.

of the first visit felt that protrusion of a cervical disk was to be excluded, since the patient's pain in the left upper extremity could be produced every time his neck was hyperextended. The patient also stated that coughing and sneezing aggravated the pain. Roentgenologic examination of the cervical portion of the spinal column revealed a loss of the normal cervical lordosis. It was the opinion of the orthopedic consultant that although the patient had an acromioclavicular arthritis, this did not account for the pain in the left arm.

The patient stated that after his first visit to the clinic he went home and got along fairly well. He remained off work for another month and obtained considerable relief. When he went back to work he was able to work for some months before he had another attack of pain in the left shoulder, arm, and forearm, extending into the wrist. This pain lasted for three or four weeks, after which he felt better for a time. Then, after an attack of bronchitis and influenza, the pain became severe again in the left shoulder and the left upper extremity, and extended into the fourth and fifth fingers. Cervical traction made his pain worse; this not infrequently occurs, contrary to some authors, when protrusion of a cervical disk is treated with traction.

In the two years that had passed since the patient's first visit, there had been no developments to warrant further suspicion of a malignant condition involving the chest or brachial plexus. It was decided to proceed with further investigations to establish a diagnosis of protrusion of a cervical intervertebral disk.

On physical examination it was noted that motions of the neck caused a reproduction of the pain, which partook of root characteristics, extending to the fourth and fifth fingers. When the pain was severe, it extended to all fingers. The results of neurologic examination were normal, as they had been at the time of his visit to the clinic two years before. A diagnostic lumbar puncture resulted in normal findings, with a total protein content of only 30 mg. per 100 cc. A diagnosis of protruded intervertebral disk, probably at the seventh cervical space and involving the eighth cervical nerve root on the left, was made, and operation for its removal was advised.

A left cervical hemilaminectomy was performed, with the patient under intratracheal anesthesia and in the face-down position. The eighth cervical nerve root was enlarged, hyperirritable and congested, whereas the nerve root above and the one below were normal. A free fragment of protruded disk was removed from above and beneath the involved eighth cervical nerve root. The dura mater was not opened. A silver clip was placed for postoperative roentgenographic confirmation of the location of the lesion. This was particularly valuable in this case, for, although clinically it was felt that the lesion was at the seventh cervical interspace, it was my opinion that the fragment had been removed from the sixth cervical interspace. The placing of the silver clip definitely confirmed the preoperative clinical localization.

The patient was in the hospital ten days, and at the time of the postoperative examination all his preoperative complaints were gone. There was a little stiffness in the neck. Neurologic examination gave negative results. There was no wasting of the muscles of the hand, and the reflexes were normal. The surgical treatment in this case gave an excellent result after a thorough trial of conservative treatment had failed to accomplish anything.

#### *Protrusion of the sixth cervical disk*

**Case 3.** A 48 year old man was referred to the clinic because of a suspected lesion in the cervical



part of the spinal column. Approximately two and a half years before he had been in a head-on automobile accident and sustained an injury to the left shoulder and left side of the head. About two years after this accident he noted that his left shoulder was slumping and that his head was pulling to the right. Two months later he noted soreness in the left side of the thorax and in the muscles in the left side of the neck. Heat gave temporary relief. About a month later the soreness in the left side of the neck returned, and aching pains developed in the left shoulder and arm; the pain gradually worked down to the second and third fingers of his left hand. Later, paresthesias developed down the outside of the arm and the medial side of the second and third fingers, and the thumb. Turning or extending the neck produced pain. He had not noticed any effect from coughing or sneezing, nor any weakness or clumsiness in the use of his left hand.

On physical examination it was noted that movements of the cervical portion of the spinal column were moderately limited, that pressure over the spinous process of the sixth cervical vertebra caused some tenderness, and that pressure on the left side of the neck caused tingling in the fingers of the left hand. Scalene maneuvers were negative for the scalene syndrome. The results of neurologic examination were normal: there was no loss of motor power, no change in the reflexes, and no loss of sensation.

Roentgenologic examination of the cervical part of the spinal column revealed hypertrophic changes in the lower cervical vertebrae and generalized decrease in the intervertebral spaces. The results of a diagnostic lumbar puncture were within normal limits; there was no disturbance of hydrodynamics. The total protein content of the spinal fluid was only 20 mg. per 100 cc. The only neurologic signs were spasm of the muscles of the neck and the extension of the pain, and the more or less characteristic hypertrophic changes observed in the neck were such as are seen in cases of arthritis and extensive traumatic conditions. Because of the type of pain, suggesting root characteristics, and the extension to the thumb, index and middle fingers, however, a clinical diagnosis of protruded intervertebral disk was made.

Since the patient had not obtained relief on conservative treatment, a left cervical hemilaminectomy was performed. A typical protrusion of the sixth cervical disk on the left side, compressing the seventh cervical root, was found and removed. At the time of operation it was noted that the sixth root as it crossed the fifth space was also hyperirritable, but this irritability was due to a hypertrophic ridge at the fifth interspace and not to a protruded disk, whereas there was a typical protrusion at the sixth space. A silver clip was placed at the site of removal and a postoperative roentgenogram confirmed the site of the protrusion at the sixth cervical space on the left.

The day following the operation the patient volunteered the information that he could lie on his left side for the first time without pain, and that the numbness of the fingers had decreased since the removal of the protruded disk twenty-four hours previously. He was confined to the hospital for only eight days and, after a few days' stay in town, was allowed to drive his own automobile half-way across the continent to his home.

#### *Protrusion of the fifth cervical disk*

**Case 4.** A man aged 50 years registered at the clinic with the chief complaint of continuous, severe, lightning-like pain over the right scapula and into the right shoulder. The pain had been present

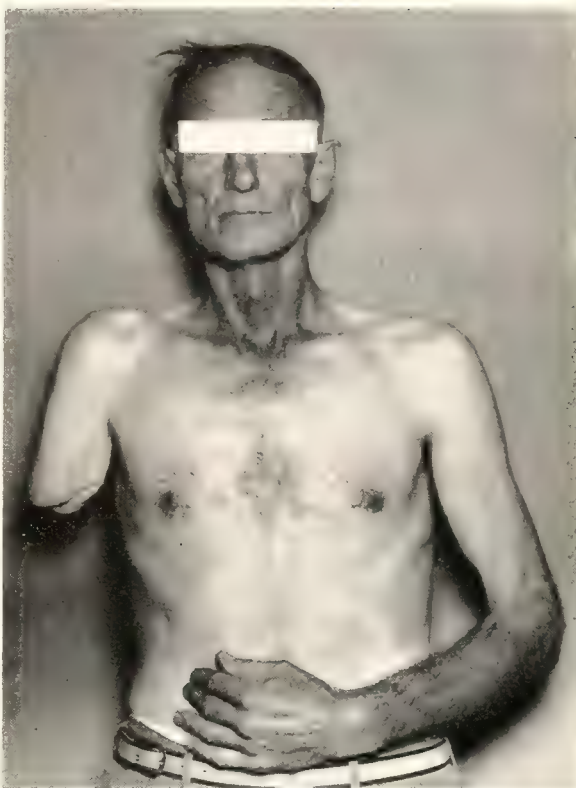


Fig. 5. (Case 4.) Photograph of the patient seven days after the removal of a protrusion of the fifth cervical disk which had produced incapacitating pain in the amputation stump.

for two weeks. He had undergone amputation of his right arm at the middle third of the humerus in 1941, following a corn-picker injury. After a prosthesis had been worn for a time, re-amputation, with excision of a neuroma, was performed in July, 1946, because of pain and burning in the stump. The re-amputation relieved most of the pain, which had been centered in the tip of the stump.

About two weeks before coming to us he slipped while walking and fell on his right shoulder, receiving an abrasion at the end of the stump. The next day he experienced severe aching pain in the right shoulder, extending out into the stump. This pain, which was sharp and stabbing, seemed to begin in a localized spot in the middle of the scapular region and then to spread out over the shoulder and into the right axilla. He stated that this pain was quite different from that which he had had previously in the stump.

Physical examination revealed considerable atrophy of the muscles about the right shoulder joint, which was considered to be consistent with amputation through the upper part of the arm. Roentgenologic examination of the right shoulder region showed no abnormality of the bones, but slight narrowing of the fifth cervical interspace. The results of neurologic examination were within normal limits. Owing to the high amputation (fig. 5) of the right upper extremity, reflexes, motor power, and sensation of the right upper extremity could not be tested. Multiple nerve blocks, including a block of the right suprascapular nerve and paravertebral nerve blocks in the high thoracic region, were carried out without benefit.

This patient's condition was recognized as atypical and as presenting a definite diagnostic problem; consequently, he was kept under observation and conservative treatment for several weeks. However, since he stated that the recent pain was quite different from that which he had had previously in the amputated stump, since motion of the neck produced the pain, suggesting that it was of the root type, and since there was narrowing of the fifth cervical interspace, a diagnostic lumbar puncture was performed, in spite of the fact that there was no extremity to test for reflexes and sensations to determine whether an intraspinal lesion was causing the pain. Although the hydrodynamics of the spinal fluid were normal, the total protein content was 45 mg. per 100 cc. An exploratory right cervical hemilaminectomy to determine the presence or absence of a protruded cervical disk was advised; if none should be found, a rhizotomy of the posterior roots of the eighth cervical and the first and second thoracic nerves was to be carried out.

On September 29, 1948, the patient had a right cervical hemilaminectomy, with the removal of a typical protrusion of the fifth cervical disk which was compressing the sixth cervical nerve root. The nerve root was enlarged, hyperirritable, and displaced posteriorly by a typical free-lying protrusion of the underlying disk. After the protruded disk was removed, a silver clip was placed just posterior to the cervical nerve root from beneath which the protrusion had been removed, for post-operative roentgenologic confirmation of the exact location.

The day following the operation the patient stated that he was pain-free in the right upper extremity for the first time in five weeks (since onset of pain). His convalescence was uneventful, he was confined to the hospital for only seven days and obtained an excellent result.

This case is of unusual interest from many points of view, but from two in particular. The diagnosis was suspected in spite of the fact that the patient had no right upper extremity to test for reflexes, sensation, or motor power. The history and clinical findings strongly suggested the diagnosis, and the increase in total protein of the spinal fluid gave further evidence of an intraspinal lesion. A medicolegal question was present in this case; namely, did the second accident—that is, the fall—account for the patient's pain and disability, or were they the result of the injury which occurred nine years before, when he sustained a traumatic amputation of his right upper extremity?

### *Summary and Conclusion*

There are many anatomic and neoplastic conditions which may give rise to intractable pain in the neck and upper extremities. Before adequate and satisfactory treatment can be carried out, an accurate determination of the etiologic factor in each case should be made. Among the common causes of such pain are the anterior scalene syndrome, with or without cervical ribs; the costoclavicular

syndrome; nocturnal dysesthesias of the arm; the hyperabduction syndrome, tumors of the cervical cord and its nerve roots; cervical arthritis; brachial neuritis; and protrusion of cervical intervertebral disks.

The diagnosis, differential diagnosis, and methods of studying such cases are given. Conservative and surgical treatments are described, along with the preferable type of anesthesia. The results which can be expected from treatment are mentioned. A report of 4 cases of protrusion of a cervical intervertebral disk is given in order to indicate the symptoms, signs, methods of investigation, and a type of treatment which has given excellent results.

Although pain in the neck and upper extremity is very troublesome, and can be completely disabling because of its severity, most patients with such a complaint can be benefited if the etiologic factor is ferreted out and the proper treatment administered.

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### **Sandoz Announces Editorial Appointment**

Rudolf A. Steindler, a science writer of broad experience, has been appointed to the medical editorial staff of Sandoz Pharmaceuticals. "Bob" Steindler is well known in the editorial and publishing field for his writings on medical and related scientific subjects. He has been active in editorial work for medical and pharmaceutical publications. Among the assignments he has handled are associate editorship for a leading pharmaceutical journal, the preparation of reports for the Office of Scientific Research and Development, and accounts on projects at a State Agricultural Experimental Station.



## JOINT RESPONSIBILITIES OF PUBLIC HEALTH WORKERS AND PRIVATE PRACTITIONERS

J. W. R. NORTON, M.D., F.A.C.P.\*

RALEIGH

The customary detailed report to this Conjoint Session has been submitted. It is felt, however, that instead of an annual review of activities at this time, it would be more helpful to mention and comment on some of the opportunities for constructive joint action by private practitioners and public health workers. Let us go into consultation regarding our state and our community, just as we might determine the essential findings, make a diagnosis, and work out a plan of treatment for an individual patient.

### *The Need for Unity*

We are often faced with unreasoning and undeserved criticism, and with open attempts to make immediate radical changes by those with selfish motives or those who have sincere intentions but lack a basic understanding of the total problem. It is essential that we who have dedicated our lives to medical and health care understand each other and give intensive study to current problems and the best methods for their solution. We must resist all attempts to drive wedges between those physicians who work for salaries and those who are reimbursed on a fee for service basis. Clinicians, researchers, laboratory workers, teachers, and public health physicians alike seek the goal of constantly improving health in North Carolina. Specialists, general practitioners, and their patients are benefited when similarities rather than differences are emphasized. In providing modern medical and health care, it is essential that we work together in harmony. The best treatment includes prevention. Desirable public health methods assist, and never interfere with ethical private practice.

Our embarrassment and disappointment at unfair criticism and selfish attempts at regimentation must not be allowed to induce a persecution complex, with a resulting tendency to strike out blindly at foe and friend alike. Careful analysis should enable us to determine basic motives, and it should prove

helpful to discuss all medical and health planning with our co-workers and those who pay the bill. Private practitioners, public health workers, and the public all operate under a distinct handicap when one group assumes that the other groups are not equally unselfish and are working in opposition. All sound public health programs have been initiated, and are maintained, under the leadership of public-spirited private practitioners. The few short-sighted personalities who would interfere with a continuation of this sound long-range plan fortunately are decreasing. Strife and distrust must be replaced everywhere by constructive and patient understanding.

### *The Problem of Non-Communicable Diseases*

A year ago attention was invited to the rising toll from diseases of the heart and blood vessels, cancer, nephritis, diabetes, mental disease, and accidents. Again, there is basis for the confident belief that we can work out a program in the control of these non-communicable diseases that will be ethical, acceptable and effective, and that will encroach upon the prerogatives of none. All public health programs directed against these problems will have but one objective—namely, to promote early private medical care for the patient and to insure the success of that care by providing every physician who needs them the services of personnel trained in case-finding, follow-up, and rehabilitation. We can make full use of the lessons learned in developing dependable techniques of control against communicable diseases, and attack health hazards in the field of non-communicable diseases with the same vigor, tenacity, and freedom from emotional or personal consideration.

Neither the public health objectives nor those of the private practitioner can remain static. We must make progress together. The community patient and the individual patient have each received increasingly prompt and effective care. Public health procedures have successively emphasized the importance of quarantine and fumigation, regulatory sanitation, isolation and immunization, chlorination and pasteurization, epidemiologic investigation, nutrition and health education, prenatal care and family planning, case-finding, and provision for early treatment by private physicians. There is always resistance to change, and the timid

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have predicted dire calamity as procedures that were acceptable in former days have become obsolete, or as the emphasis has shifted. Private practitioners will be happier and do better work when every case of cancer, heart disease, diabetes, and mental disease is found early, just as was formerly the case when children became immunized against smallpox, typhoid, diphtheria, whooping cough and tetanus, and cases of tuberculosis and syphilis were detected earlier. Prompt elimination of reservoirs of infection and of influences that undermine individual or community health has become a recognized necessity.

### *For the Good of All*

The field of opportunity for cooperation between public health and private practice is limited neither to communicable disease control nor to services for the indigent. Whatever proves most beneficial to the conservation, the promotion, or the recovery of health for the individual or the community patient has been observed to be good for the doctor. There are no exceptions of consequence to this rule. When we prevent the preventable, provide for universal early case-finding, and arrange jointly for prompt and adequate treatment, no one suffers. The private practitioner is aided, and the public is benefited when state and local health departments work to prevent disease, assist in case-finding, and help to provide expensive equipment and facilities for treatment. Your public health departments are striving wholeheartedly to improve working conditions for private practitioners and to develop voluntary prepayment hospital and medical care plans.

### *Civic Responsibilities and Public Relations*

As individuals and as a profession we must continuously strive to make good with the public who pays the bill, not only for public health, but for private practice as well. Better training in public relations and in our civic responsibilities is needed for our profession, which must be alert to the continuing necessity for current internal corrections and long-range planning. This remains the biggest gap in medical education. It has been said that "the public is down on what it is not up on." As individuals and as a profession we must have it said of us that we are earnestly striving to make good and

better; not that we appear to think we have arrived.

In some cases, private practitioners, while alert to the need for improvements in the treatment of illnesses and injuries, have neglected their responsibility for leadership in planning efficient local health departments, and hospital and medical care for their communities. It is desirable that our grievance committees aim toward long-range constructive planning, in addition to making delayed corrections. If physicians fail to lead in community health planning through boards of health, health councils, rural health conferences, and all other means, those who take over this function may omit medical consultation even during the planning stage of their activity.

The public is not fully informed as to its part in adjusting to some of our modern changes. With good roads, electricity, telephone service, and desirable developments in clinics and hospitals, there is no more need for a physician at every crossroad than for a general store. A doctor ten miles away may be more readily available now than the one who, a generation ago, was within walking distance. A well informed public can also conserve the doctor's time and save considerable expense by becoming accustomed to office rather than home visits, day rather than night calls, and prompter but shorter hospitalization. In former generations the doctor and hospital were used only in extreme emergencies. Medical costs are less when the physician is consulted early for the "ounce of prevention" or the "stitch in time."

Perhaps the glamor of the medical specialist and the specialized or categorical public health worker has been disproportionately emphasized; certainly too little is associated with the general practitioner and the generalized service of the local health department. Medical students fear lack of prestige in general practice, and the public and appropriating bodies get exaggerated views of individual diseases and other specific health problems rather than an enthusiastic appreciation of the best general medical and health service.

Constructive suggestions for the improvement of public health practices are always welcome from individuals and from the county and state medical societies. These suggestions should be made to local boards or the State Board of Health, however, and not handled so as to create the impression that



we in medical and public health work are a house divided. County medical societies are urged to furnish leadership and guidance in medical and health planning. Local health departments are relatively free, and should be responsive to their local medical societies and the people they serve.

State Board of Health rules on policy are general and flexible. Where we fall short in uniformity, we gain in freedom and effectiveness, in school health and other services. Your local health officer, local or state, welcomes the kind of relationship that each of you would wish if you were a health officer.

### *Freedom from Regimentation*

There are two misconceptions that I would like to correct. One is that the use of tax funds inevitably leads to bureaucratic control and loss of individual freedom. The selective and wise use of tax money may have the opposite effect. Federal appropriations to our State Board of Health, and state and federal monies used by our local health departments aid and assist, but have not interfered with, our complete state and local freedom. The same can be said, so far, with regard to the Hill-Burton funds in the construction period. Hospital maintenance problems are becoming complicated and deserve careful long-range planning.

Another misconception is the idea that public health work in North Carolina infringes upon the field of private practice and leads to increasing governmental controls. If each of you would analyze carefully the work of your State Board of Health and your local health department you would be convinced otherwise. Which of these services would you as private practitioners eliminate, or be able, or wish to do altogether by yourselves: environmental sanitation; control of sewage, water, and food; epidemiology; maternal and child health; health education; vital statistics; diagnostic and central laboratory; oral hygiene; industrial hygiene; mental health; organizing for cancer case-finding; planning school health services; making arrangements for crippled children's work; education in nutrition; accident prevention?

Physicians on our state and local boards of health have a major share in planning and in guiding policies in this state. North Carolina physicians, dentists, pharmacists, and

other leaders can take real pride and reassurance of continued freedom from medical regimentation in the excellent public relations created by these health services.

### *Legislative Matters*

A matter worthy of mention, even in a brief report, is the organized effort of those taking the shorter, easier, cheaper course of training to do away with all distinctions between them and doctors with more thorough preparation. In the 1951 General Assembly the following bills were introduced: that a chiropodist be defined as a physician and surgeon of the foot and leg; that naturopaths have a special board; that chiropractors be allowed to sign death certificates; that drug clerks become assistant pharmacists; that optometrists not be distinguished from ophthalmologists in referrals by public agencies. A common theme is evident in all five bills: "Do less, but demand just as much recognition as the one who does more. Scream 'discrimination!' when a distinction on the basis of qualifications is attempted." Does the plan of salvation operate "without discrimination" when it promises a crown only to those who bear the cross? Ability to select and to make a distinction are basic necessities for progress in medicine and public health. Remove this freedom from public agencies and the loss of individual freedom may soon follow.

Other items of interest from the 1951 General Assembly are: the appropriation of \$50,000 for a cancer hospital for indigent patients in the terminal stage of the disease, and \$86,500 for crippled children; a stream sanitation law to be administered by a committee under the State Board of Health; a revised tuberculosis control law; establishment of a board for the registration of physical therapists; and slight amendments to our laws relating to vital statistics, retirement of public health workers, diphtheria immunization, and sanitary districts. The new State Health Department building is to be officially known as the "Cooper Health Building."

### *Tribute to Dr. Cooper*

It seems appropriate to close with a reference to one whose life was devoted to increasing joint action by private practitioners and public health workers to the benefit of everyone. After forty-five years in private practice and local and state health work, Dr.

George Marion Cooper was gathered to his fathers on December 18, 1950. His and succeeding generations reverently give thanks to our Creator and call him blessed. For many, his unselfish and devoted service has added years to life and also life to years. His life is proof that public health and private practice can advance hand in hand, and that the health of each and all is thereby made better. He led us far along the road we should follow. He proved that, as we overcome or divest ourselves of handicaps that beset us as an individual or as a profession, our hold on those things we would like most to keep is strengthened.

### CONGESTIVE HEART FAILURE

MONROE T. GILMOUR, M.D., F.A.C.P.

and

HORACE H. HODGES, M.D., F.A.C.P.

CHARLOTTE

Recent significant advances in the field of cardiac physiology justify a review of the new developments in an attempt to evaluate their implications and bearing upon accepted methods of treating the failing heart.

#### *The Theory of "Backward Failure"*

In 1889, just 61 years ago, Cohnheim<sup>(1)</sup> noted that the injection of fluid into the pericardial sac of a dog resulted in a rise of venous pressure and in venous congestion. Starling<sup>(2)</sup>, in 1896, achieved the same results by injecting oil into the pericardial sac. Out of the work of these two men was developed the classic, largely mechanical theory of heart failure, which stood virtually unchallenged for half a century and which only during the past decade has been questioned, largely as the result of the work of Starr<sup>(3)</sup>, Stead<sup>(4)</sup>, and others.

This theory of "backward failure" is convincing in its simplicity. The heart is likened unto a pump which propels water over a dam and into the stream below. When the pump does its work inefficiently, less water is pumped over the spill-way, the water rises in the reservoir behind the dam and secondarily in all the small tributaries of the reservoir. Just so, as the heart fails, it ejects less blood with each beat from the ventricles, and

there remains an increasing residue of blood in the ventricles after the systole. This residue offers greater resistance to the diastolic filling of the ventricles, and consequently causes increased pressure in the veins supplying the heart, either in the pulmonary or left ventricular circuit, or in the systemic, right ventricular circuit. The increased resistance to diastolic filling is partially compensated for by a somewhat greater distention of the ventricle.

Starling's Law of the Heart states that "the mechanical energy set free on passage from the resting to the contracted state . . . depends on the length of the muscle fiber."<sup>(5)</sup> Thus as diastolic ventricular filling increases, cardiac output again improves, venous backward pressure is somewhat lessened, and complete failure is postponed. Eventually, however, the effective limits of this mechanism are passed; with further ventricular distention the efficiency of contraction diminishes and more profound decompensation ensues.

As venous pressure is augmented by the failure of the inadequately emptied and unduly distended heart to receive all the blood flowing to it, pressure is transmitted *backward* through the greater veins into the lesser veins and capillaries. This pressure eventually becomes great enough to overcome the opposing osmotic pressure of the plasma and the mechanical pressure of the tissue and extracellular fluids, all tending to retain fluid within the vascular system, so that there is transudation of fluid from the vessels into the extracellular space. The capillary anoxia, which itself results from the sluggish and inadequate circulation, further increases capillary permeability and favors this formation of edema in both lungs and body tissues. Impairment of the normal lymphatic return may further accentuate the accumulation of edema fluid in the tissue extracellular space.

There are certain facts which favor this theory. It is known that increased renal venous pressure itself results in increased tubular resorption and consequently in greater retention of salt and water. Disputing the results of other investigators, Harrison and colleagues<sup>(6)</sup> maintain that when digitalis is withheld from a patient who has been in cardiac failure, venous pressure rises before weight gain occurs and not afterwards, as Stead contends. These observations do not prove the theory, however; they merely appear to be consistent with it.



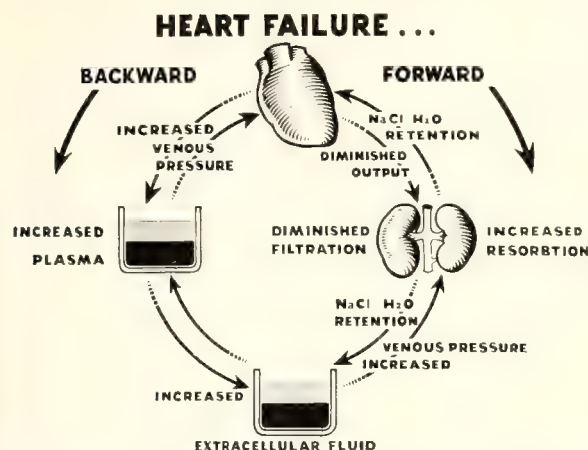


Fig. 1. Diagrammatic representation of the forward and backward theories of congestive heart failure.

Isaac Starr<sup>(3a,b)</sup> in 1940, recollecting his observations as an intern of the continued distention of neck veins after death in patients dying of heart failure, made and reported a series of measurements which showed that the static elevated venous blood pressure in such patients was, in fact, maintained after death for a time, and therefore was not dependent on cardiac function. This work is looked upon as one of the key observations which have discredited "the backward failure" hypothesis. It seems to us that its importance and significance in this respect has been considerably overestimated. It is not the adequate functioning of the heart, but rather its failure to function properly, which proponents of the "backward failure" theory have blamed for the increased venous pressure. In death, the heart achieves the ultimate in failure of function; and we cannot see why under such circumstances one would expect the increased venous pressure to disappear at once when death occurs. It would seem that one might predict the contrary, and expect a maintained venous pressure for a time after the heart has ceased entirely to pump blood from the venous to the arterial reservoir.

Be that as it may, Starr went on from these observations to a series of animal experiments, reported in 1943<sup>(3a)</sup>, in which he showed that extensive injury to the right ventricular muscle did not cause any significant increase in venous pressure, thus suggesting that the increased venous pressure of heart failure was not the result of the failure

of the myocardium itself but must be explained by other factors.

It seems to us, however, that one may question the validity of the results of these acute, devastating experiments as an interpretation of what happens in clinical heart failure. This work and other meticulous and interesting engineering considerations in connection with a mechanical pump which Starr devised, did have the advantage of showing that other factors besides the failure of the pump must be present if one is to duplicate the conditions observed in heart failure. These other factors include general vasoconstriction, increased pressure on vessels from without, and the insertion of additional fluid into the vascular system.

#### *The "Forward Failure" Theory*

From these observations and experiments Starr, Stead, Merrill and others<sup>(3,4,7)</sup> have evolved the "forward failure" theory. According to this theory the initiating factor—as it was also in the "backward failure" theory—is the failure of the heart muscle to function properly. This results in an either absolute or relative inadequacy of cardiac output for the metabolic needs of the tissues. As a compensatory mechanism, generalized vasoconstriction occurs, apparently to a disproportionate degree in the kidneys. There is naturally increased renal vascular resistance and a diminished renal blood flow, with diminished glomerular filtration, which in turn causes a diminished excretion of salt and water by the kidneys. The retained electrolytes and fluids enter the extracellular space, cause increased fluid volume in this compartment, with eventual formation of edema, and secondarily result in an increased blood volume and venous pressure.

There are unquestionably cogent arguments for the validity of this theory. Stead and his associates, on the basis of observations and experiments, are convinced that the gain in body weight with the onset of cardiac decompensation occurs before the venous pressure rises. This gain, they maintain, is followed by an increase in blood volume and, lastly, by an increase in venous pressure. Admittedly there are still many unknowns and many loopholes in this theory. The role of hormonal influences from the adrenal gland and elsewhere, the ways by which vasoconstriction is mediated, and the exact mechanism of electrolyte and water retention by

changes in renal tubular function remain to be elucidated more clearly.

### *The Synthesized Viewpoint*

It is likely that the truth lies midway between the two extreme positions and that it partakes to a degree of elements of both. Though Stead has been thought of as the most compelling exponent of the "forward failure" hypothesis, it has remained for him to formulate the best synthesis of the two viewpoints<sup>(4c)</sup>. He points out that in acute pulmonary edema of sudden onset the lungs are actually flooded, as a result of failure of the left ventricle, causing a backing up of blood in the way already outlined. On the other hand, congestion in the body, due to chronic failure, with the backing up of blood behind the right ventricle, is more difficult to explain on this basis. Here the "forward failure" mechanism, with the retention of sodium and water by the kidneys, appears to predominate. Thus, the clinical picture in a patient with cardiac decompensation appears to result from an interplay of both backward and forward failure.

### *Clinical Implications*

What then are the clinical implications of this recent ferment of thought and work on the subject of heart failure? Has it changed our relatively traditional methods of treatment in any radical way? Has it improved the care of our cardiac patients?

Our own answer to the first of these questions is *no*, and to the second, *yes*. Actually, no new or radical departure in the treatment of the failing heart has been introduced. Our knowledge of the mechanisms involved has been broadened, our understanding of the pathologic physiology of the failing heart has been increased, and certain new emphases and evaluations have been given to the usual methods of therapy. As a result, we are able to achieve more satisfactory and effective results in caring for patients with chronic heart failure.

In the past we were likely to think of the inefficient and poorly functioning myocardium as of primary and almost sole importance. Methods of treatment directed toward these other factors seemed of secondary importance. We have now had emphasized to us the fact that in the presence of heart failure there are actually three physiologic defects to be treated and, if possible, to be corrected: (1) the failing heart muscle;

(2) the retention of electrolytes, primarily sodium; and (3) the retention of water. Attention to only one or two of these factors is often sufficient to restore cardiac compensation, but frequently we can prevent chronic invalidism or even death only by the most assiduous application of therapy for all three simultaneously.

For each of these defects we have a corresponding therapeutic tool, which may be used separately or simultaneously. For the failing heart muscle there is digitalis, for the retention of sodium there is a strict low sodium regimen\*, and for the retention of water there are the mercurial diuretics. These constitute the three D's of cardiac therapy—digitalis, diet, and diuretics. They are as basic in the treatment of a failing heart as are the three R's in education. Certain accessory therapeutic tools, such as phlebotomy, tourniquet application to the extremities, oxygen, rest, adequate nutrition, vitamins, and Dicumarol for the patient with prolonged decompensation, and extended bed rest, may increase the effectiveness of this basic therapy.

### *Digitalis*

Digitalis remains our mainstay in treating cardiac failure. Unless there is some contraindication, digitalis should be used initially, and diet and diuretics, to a greater or lesser degree, as the further need indicates. With regard to digitalis I should like to stress again the fact that the only rule of thumb for adequate digitalization is to digitalize until adequate results—as gauged by cardiac slowing, improved function, electrocardiographic changes, and possibly the appearance of early symptoms of intolerance and toxicity—have been obtained. The only correct dose of digitalis is *enough*!

Unfortunately, the flooding of the market with an endless number of new or newly named digitalis and digitalis glucoside products, backed by the enthusiastic claims of their manufacturers and of the detail men who purvey them, has retarded and confused digitalis therapy. Save for certain basic differences between the whole leaf preparation and the purified glucoside products, there is little in the literature to support the claims of superiority of one of these preparations over another.

The purified glucosides of *Digitalis purpurea* such as digitoxin have the advantage of standardization of dose based on a con-

\*And more recently the cation exchange resins.



stant weight rather than on biologic assay, and the further advantage of rather rapid and complete absorption from the gastrointestinal tract without much variation from patient to patient or from preparation to preparation, and also with less tendency toward nausea than results from a comparable dose of digitalis leaf given by mouth. These glucosides have the disadvantage of somewhat greater cost and of less easily apparent early signs of toxicity, which may therefore be insidious in onset. The more prolonged excretion of digitoxin means that toxic symptoms are slow to disappear when once recognized, making careful observation of the patient from this viewpoint imperative. There is evidence that digoxin has the advantage of more rapid excretion and hence greater safety. Gitalin, an amorphous mixture of water soluble glucosides, gives promise of a wider range of effectiveness, with a greater margin of safety. With regard to absorption and excretion, it lies midway between digoxin and digitoxin.

Lantoside C (cedilanid), a purified glucoside of *Digitalis lanata*, is available for rapid, emergency, intravenous digitalization, and makes unnecessary, except in unusual emergency, the use of powerful and probably more dangerous drugs such as ouabain and strophanthin, which previously had to be used in such situations.

In addition to the well known effects of digitalis upon the heart muscle itself, there is some recent evidence that it may likewise have a peripheral effect upon the vessels, causing some degree of vasodilation and in this way improving somewhat the effectiveness of general and renal circulation resulting from any given cardiac output. While this theory has not yet been finally established, it does represent an interesting new trend of thought and work.

#### *Low sodium diets*

To be really useful, low sodium diets must be relatively strict and carefully followed. In situations of mild failure—probably easily controlled by digitalis alone—it may be enough simply to omit the salt shaker and allow no added salt. In those difficult cases which tax our ingenuity, however, much more strict over-all dietary programs, involving the selection and preparation of foods, and the careful elimination of any sodium-containing medications such as saline laxatives, must be insisted on.

The most striking development in this field, has been the realization that careful sodium restrictions makes unnecessary the rigid fluid deprivation which used to be practiced and, when advisable, makes it possible for fluids to be forced in large amounts. Similarly the Karrell (milk) diet is unsound, because of its high sodium content.

Salt substitutes, somewhat in disrepute since the exaggerated and largely undeserved notoriety given lithium-containing Westsal, do not seem to be very helpful. Used in small or moderate amounts, the ones available are probably not dangerous, though most of them contain some potassium. We find, however, that patients who use the substitutes are apt to tire of them sooner than they would of a low salt regimen, and that it is those patients who accustom themselves to the natural taste of food entirely unsalted who are most likely to follow a low sodium program indefinitely. Recent stimulating work with cation exchange resins leads to the hope that these low-sodium regimens may later be made more effective and possibly somewhat less rigid from the patient's viewpoint.

#### *Mercurial diuretics*

The chief advance in the use of the mercurial diuretics has been (1) the emphasis upon their more frequent and adequate use, often daily for a time, in the presence of chronic decompensation not responding to other methods of therapy; and (2) the emphasis upon their prophylactic use at regular, less frequent intervals in patients who are on the verge of decompensation.

Recently, the combination of Mercuhydrin and vitamin C in a tablet, has provided an oral preparation that is usually well tolerated and useful in some cases in a prophylactic and maintenance role. We recall a case under our care of a young woman in her thirties, with a congenital interauricular septal defect. Her compensation is usually well maintained when she is living quietly at home on digitalis and a low sodium diet, with adequate rest. On trips, however, increased activity and less careful attention to diet, have often caused symptoms of further decompensation to appear either on the trip or soon after her return, requiring more rest and fairly frequent administration of Mercuhydrin for a time. For several months now she has been taking one tablet of Mercuhydrin with vitamin C daily, or every second

or third day during her trips, and has not required Mercuhydrin intramuscularly or any other further period of bed rest save once or twice in the presence of a respiratory infection.

We should like to mention a newer mercurial diuretic, Thiomerin, which has been studied by Batterman<sup>(8)</sup>. He believes it to be the most promising diuretic yet available because of the degree of diuresis attained, the regularity of response, the wider range of safety, and the ease of administration. It may be given subcutaneously without unpleasant side effects. The added advantage of ammonium chloride used in conjunction with the mercurial diuretics for greater effectiveness is well known.

The more enthusiastic employment of low salt diets, together with more frequent and profuse diuresis from mercurial preparations, at times causes a serious lowering of blood sodium and chloride, and possibly of calcium, potassium, and the other electrolytes as well. In the milder forms this reduction may cause leg cramps, and may be corrected simply by the ingestion of salt by mouth. However, it may result in hypovolemia, with severe electrolyte deficiency, muscle and abdominal cramps, nausea, vomiting, apathy, and even irreversible shock and death. At the first sign that the above chain of events is being set in motion, a plasma chloride determination should be done promptly. The administration of fluid and electrolytes may be life-saving under some circumstances.

When diuretics are given in large amounts for a long period of time, without due regard for serious impairment of renal function, mercurialism may result. The remote hazard of sudden death from the intravenous administration of mercurial preparations should also be borne in mind. This method of administration is really no longer necessary and probably should be abandoned, since satisfactory intramuscular, subcutaneous, and even oral preparations are now available.

There is a further hazard that energetic and too rapid diuresis in elderly patients may precipitate cerebral ischemia and a toxic psychosis or an episode of cerebral thrombosis, possibly related to dehydration. Fishberg<sup>(9)</sup> has emphasized the possibility that chronic deficiency in renal function, with azotemia, and even more advanced uremia and death may result from severe, prolonged dehydration.

### Summary

In reviewing the pathologic physiology of heart failure, we have emphasized that both the "backward failure" and the "forward failure" theories have evidence in their favor. The issue between them is unsettled, and the truth probably contains elements of both. Consideration of the evidence relating to these two theories, however, has resulted in a better understanding of heart failure and a more effective use of the available methods for treating these patients.

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### Meat Without Salt

Successful production of a line of "low sodium" canned meats for people requiring a salt free diet, was announced today by Armour and Company. This reverses the usual process of curing and flavoring meat with salt.

Armour research workers not only found ways to make beef stew and similar products tasty without salt, but they succeeded in reducing the natural sodium in meat to a small fraction of normal.

The new Armour meat products, put up in 5½ ounce cans for a single serving, will contain only 30 to 50 mg. (1/1000 Gm.) of sodium per 100 Gm. of food in contrast to 440 to 810 mg. per 100 Gm. in regular production of similar canned meat items. The label of each can will state the sodium content so that physicians and dieticians can easily calculate the total sodium the patient gets for the day.



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"The prime object of the medical profession is to render  
service to humanity; reward or financial gain is a subordinate  
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obligation to conduct himself in accord with its ideals."—Prin-  
ciples of Medical Ethics of the American Medical Association,  
Chapter 1, Section 1.

JUNE, 1951

## THE KEY TO PEACE

The clearest exposition of the American way of life that has appeared in many a day is a slim volume of only 120 pages, including the appendix, called *The Key to Peace*. It was written by Dr. Clarence Manion, dean of the College of Law of Notre Dame University, who is one of America's greatest authorities on constitutional law. Unlike the traditional lawyer, Dean Manion writes with such direct simplicity and clarity that his little book is a delight to read.

A striking contrast between the American Revolution of 1776 and the French Revolution of 1798 is drawn.

"The French Revolution turned in the direction of the glorified 'Society' or 'State.' It generated a centrifugal force which . . . disintegrated the individual human personality, the natural hub of all social order, and flung its fragments out to the rim where the

broken pieces were congealed in the form of social and economic classes . . . The American Revolution turned directly away from collectivism and toward the basic integrity of the individual. In so doing it generated a centripetal force which destroyed class consciousness in the diversified groups of our Revolutionary population . . . . When the French Revolutionaries were hammering men into mere matter, the American Revolutionaries were exalting and safeguarding man's spirit."

Dean Manion emphasizes the fact that the United States of America from the very beginning has been a religious nation, and that its laws were founded upon the laws of God. The success of Americanism has been due to its respect for the individual, and until recently the nation has followed the pattern set by our founding fathers when, to protect the rights of the individual citizen, they carefully planned an elaborate system of checks and balances to prevent the government from becoming too powerful.

The desirability of the American way of life was proved by the hordes of immigrants who came to our country from Europe. Other countries, Dean Manion points out, have had greater resources than has America, but they have not respected the individual. The lesson is plain that it makes little difference whether a government that ignores the individual is a monarchy or a parliament. A sharp contrast is drawn between socialism and communism, on the one hand, and Americanism, on the other.

The fifth chapter of this little book boldly defends private enterprise and the right of the individual to acquire and hold private property if possible. "Proposed alternatives to private enterprise all add up to a super-state which will sterilize the natural incentive impulse of human beings with a system of complete government endowed 'security.' "

Dean Manion discusses the alarming tendency in this country to be duped into following the European pattern of a strong paternal government, and to surrender the principles which have made America great. He urges all good Americans to join in the task of propagating American principles, and concludes with the sentence: "Our ramparts are behind the deathless and self-evident truths of the Declaration of Independence." Americanism must be preserved at all costs, for it is the Key to Peace.

If Fourth of July gifts were in order, this

book would be most appropriate for any American citizen to give another, for it is a clarion call to maintain and defend the principles of the immortal Declaration of Independence. It sells for \$2.00 a copy postpaid—less in lots of more than five—and may be ordered from the Heritage Foundation, Inc., 75 East Wacker Drive, Chicago 1, Illinois.

\* \* \*

### THE ONE HUNDREDTH SESSION OF THE A.M.A.

The one hundredth annual session of the American Medical Association was held June 11-15 in Atlantic City—which bears almost the same relation to the A.M.A. that Pinehurst does to the North Carolina State Medical Society. Its splendid auditorium and wealth of excellent hotels combine to make Atlantic City the ideal convention city. More than 12,000 physicians and more than 16,000 others were registered—for a total registration of 28,396. As usual, the scientific and technical exhibits were on display, and a number of special group meetings were held several days before the formal opening session Tuesday night.

Since the meeting will be covered thoroughly in the *Journal of the American Medical Association*, only a few comments will be offered here. Dr. John W. Cline's inaugural address, "The Stature of American Medicine 1951," broadcast over the Mutual and ABC networks and published in the *Journal of the American Medical Association* for June 16, was an excellent summary of the aims, objectives, and achievements of the American Medical Association. Because of the time limit imposed by the broadcast, the whole opening session was compressed into thirty minutes. The pressure on the speakers was apparent—but all did remarkably well, notwithstanding. The greatly widened publicity obtained by a nationwide broadcast was well worth the effort required to keep within bounds.

The scientific exhibits alone were worth the trip to Atlantic City, and seasoned attendants on the annual sessions of the A.M.A. have learned that time spent in visiting these displays is well invested. North Carolina was ably represented by at least four exhibits: Trichlorethylene in Clinical Practice, by C. R. Stephen of Duke; Diagnosis and Treatment of Pathology of the Uterine Canal with the Lens Hysteroscope, by William B. Norment of Greensboro; Accidental Poisoning in

Children, by Jay M. Arena and Grant Taylor of Duke; and Role of Lipotropic Agents in Liver Disease—A Study of Phospholipid Synthesis Using Radiophosphorus, by David Cayer and W. E. Cornatzer of Bowman Gray.

Two groups of medal awards—gold, silver and bronze—are offered. "Awards in Group I are made for exhibits of individual investigations, which are judged on the basis of originality and excellence of presentation. Awards in Group II are made for exhibits which do not exemplify purely experimental studies but are judged on the basis of excellence of correlating facts and excellence of presentation." The silver medal in Group I was awarded to Drs. Cayer and Cornatzer.

A popular feature of the scientific exhibit was the daily conferences on diabetes and on overweight, nutrition, and health. The television program offered by Smith, Kline and French attracted thousands of visitors. Unfortunately, the most daring exhibition scheduled was none too successful. This was a normal delivery, scheduled for 11 a.m. Thursday. The multitude assembled to witness the performance had to be dismissed at intervals. The announcer first postponed the blessed event until 1 p.m.—then until 2, when another delay was announced. Finally, another patient was substituted for the original one, who was letting Nature take a more leisurely course than television called for.

Among the 3,000 or more spectators assembled to see this normal labor shown on TV were scores of children of all ages, from adolescents down to toddlers. It may be well for them to learn the facts of life early—but one wonders if they should begin quite so young as were some of these.

The attendance on the General Practice Section was not as good as was expected, although a very attractive program had been arranged. At least two factors were thought to play a part: one, that the meeting place assigned was in a hotel some distance from the auditorium, which was the center of activity; the other, that the Section on Internal Medicine was meeting at the same time. Since more general practitioners are interested in internal medicine than in any other medical specialty, many would like to have the opportunity of attending both sections. It is to be hoped that next year the conflict may be avoided, and that a meeting place nearer the center of things be assigned.

A summary of the House of Delegates will be published in the *Journal of the American*



*Medical Association*, and our own delegates will have their report ready for an early issue of the NORTH CAROLINA MEDICAL JOURNAL. The choice of Dr. Louis H. Bauer of New York for president-elect was a popular one. Dr. Bauer, like the retiring president, Dr. Elmer Henderson of Kentucky, and the newly installed Dr. John W. Cline of California, has long been prominent in the A. M. A. He succeeded Dr. Henderson as chairman of the board of trustees, and has served as secretary of the World Medical Association.

In summary, it may be said that its one hundredth session was one of the best in the long history of the American Medical Association.

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### CONTRIBUTIONS OR TAXES?

On page 12 of the 1950 Annual Report of the Social Security Administration of the Federal Security Agency, Commissioner A. J. Altmeyer says: "The other large gap which remains in our social security program is our failure to assure that costs do not interpose a barrier between individuals and the preventive and curative medical care which they need. Health insurance is essential . . . voluntary insurance . . . offers only limited protection, and cannot effectively meet the needs of the entire population . . . publicly subsidized voluntary insurance would be more costly, much more complicated, and less effective than national contributory social insurance."

Contributory insurance is, of course, only a euphemism for compulsory insurance. It is pertinent here to quote from an editorial entitled "Paying for the N. H. S." in the *British Medical Journal* for March 3: "Unfortunately many people in this country still think that they are paying for the Health Service through their national health insurance contributions, and the Minister of Health, Mr. Hilary Marquand, usefully reminded the country that the insurance contributions accounted for only £40,000,000 of the £400,000,000 which is now the annual bill for the N.H.S. Ninety per cent of the cost is paid for out of taxation, and if the costs continue to rise the taxpayers . . . will have progressively less choice in the spending of their money. Not only that, but the illusion of getting something for nothing undoubtedly lessens the sense of responsibility of those who find that they can now get,

apparently free of charge, those things that formerly they were prepared to buy for themselves."

Evidently, calling taxes "contributions" does not lessen the burden on the taxpayer in England; and it certainly could not be expected to accomplish any more in this country.

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### DOCTORS' FEES—A COMPARISON

A recent story in a popular magazine told of a doctor who was called by a plumber to see his baby at the same time that the doctor's water pipe sprung a leak. An exchange of visits was arranged, and each spent approximately the same time making his call. The doctor's bill to the plumber was \$5, the plumber's to the doctor \$7.

This story could be true in almost any place. In one North Carolina city the doctor's fee for a house call has only fairly recently been increased from \$3 to \$5. When a doctor in this city found his oil furnace not functioning one morning, he called the repair man to investigate. It was found that the clock which regulated the thermostat had stopped. It began operating again when tapped by the mechanic, and ran for a few weeks before it stopped again and had to be taken down and repaired. For the first visit, a bill for \$6 came promptly. When the clock stopped the second time, the doctor gave the diagnosis over the phone, and only a few minutes was needed to disconnect the clock and take it to the shop for repairs. The bill for the second visit was \$14.50—\$8 for thermostat repair and \$6 for labor—presumably the trip to the house.

Another doctor found that his washing machine had stalled. Being somewhat of a mechanic, he diagnosed the trouble as a missing screw, and telephoned the office to send out a man with the screw. A man—and helper—soon came, but brought no screw. He agreed that one was needed, and went back to get it. When he returned with the screw, he found he had forgotten to bring a wrench to open up the machine so he could insert the screw, and had to make a second trip for the wrench. The bill sent was for \$8.50!

And yet some people think doctors' fees are unreasonable.

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## Committees and Organizations

### PUBLIC RELATIONS COMMITTEE

#### WHY THE PRIVATE PRACTICE OF MEDICINE FURNISHES THIS COUNTRY WITH THE FINEST MEDICAL CARE

JOE BAXTER ROBERSON

CANDLER HIGH SCHOOL

BUNCOMBE COUNTY, N. C.

It is sound and sensible for Americans to protect themselves against the financial shock of accident and illness. Since health insurance, so vital to every American, is here to stay, the question that arises is: How are we going to increase our health benefits? Will we change our voluntary basis with sound medical direction to a compulsory basis with politicians at the controls? The Voluntary Health Insurance Plan, which gives a person the right to spend the medical dollar as desired, means guaranteed protection from financial shock in time of illness. The plan provides a superior quality of medical care, low budget-basis cost, and certain knowledge of the costs. It offers free choice of service, free choice of doctors, and freedom from payroll taxes. The proposed Compulsory Health Insurance Plan, which is just "socialized medicine," provides second-rate medical care and fosters the decline of medical education, training, research, and the extension of controls over other professions. It will do away with personal privacy in medical matters, since the government will collect the taxes, control the money, determine the services, set the rates, and maintain the records.

The office of the Federal Security Administration proposes the multi-billion dollar program, which would set up the National Social Insurance System as the head. In such a case, vast sums of money would be required, both to support the new office-holders who would be necessary to run the system, and to build up reserve fund accounts in the treasury. Perhaps for the first year or two, taxes would be small, but as time goes on they would increase. To administer the proposed system the whole United States would have to be divided into administrative districts, each about the size of a city police precinct. Many thousands of administrators

and assistants would be required. The Federal Security Administration would collect all the so-called "security taxes." The tax estimates range from 20 to 30 per cent on every income in the nation. Half would be paid by the employee and half by the employer. Self-employed would pay the whole amount. There is no escape from the compulsory tax, for it has to be paid. This plan would supplant Voluntary Health Insurance with socialized medicine. Compared with the compulsory plan the voluntary plan now costs only \$2.50 for an individual, or 4 per cent of a yearly income.

Germany had the first and strongest all-inclusive program, but on account of many socialistic works in its government a dictator came into control, and the government was finally overthrown. England, for example, has a socialized system of medicine in which one doctor may see as many as eighty patients in four hours of office practice. That permits about three minutes per patient for diagnosis and treatment. England's adventure into socialized medicine has already proved two things. First, it has changed the status of the doctor. Second, the physician's livelihood and professional advancement have been taken over by a new master. The state pays him for his work with the citizen's money.

In our own country, the president, the Federal Security Administration, and those who believe in a socialistic state are for the Compulsory Health Insurance Plan. The advocates of the plan see a vital need for some socialization of medical service, as there is a vast amount of illness in spite of the great advancement in the science of medicine. They believe that socialized medicine would provide comprehensive medical care for all. They also point out that a lack of preventive service on the part of private practice is responsible for much sickness and that the cost of medical service under the present system is causing widespread hardship and dissatisfaction.

On the other hand, the American Bar Association, the United States Chamber of Commerce, the American Legion, and the Farm Bureau advocate the private practice of medicine. Almost all doctors and nurses are against the Compulsory Health Insurance Plan. They see no adequate need for a fundamental change in our system of medical service. They maintain that our present medical system is sound and that the quan-



tity and quality of service under private practice is high. There is no popular demand by the people for a different system. Even if socialized medicine solved the problems of malnutrition, overcrowding, and poor living conditions, it would not create an interest on the part of the doctor toward his patients. The greatest needs of low income groups are adequate food, clothing, and housing rather than hospitalization and medical care. If the average American can afford a daily pack of cigarettes or a Saturday night movie, that family can afford the Voluntary Insurance Plan.

The American supremacy in the field of medicine has been possible largely through two factors. The first factor is the complete liberty our forefathers won for us. Liberty places in human hands the power of choice. It inspired a young race to conquer and people a virgin continent, to perfect communications, to invent new ways of doing old tasks, and then, still unsatisfied, to dream new dreams and bring them to amazing fulfillment. Save for the dynamic energy released by the practice of liberty, little progress would have been made in the standard of life and living upon the American continent.

The second factor is the profound impulse of Christian philanthropy. Often other peoples, usually the less successful, have condemned Americans as money-getters and profiteers. Nothing could more clearly show the falsity of this charge than the lavish manner in which the fruits of American business have been poured out for humane causes. Wherever human needs have appeared, Americans have been warmhearted and generous, giving freely of the substance earned by foresight and industry. As in no other land on earth, the earnings of Americans have been given to erect hospitals, sanatoriums and medical schools, and to further medical research. Yet persons argue that American medicine and surgery have not been perfect. What human activity has? Some people try to paint the American medical system as a low grade system. This fault cannot be laid at the feet of American doctors, nurses and hospitals, because their achievements have earned the respect of the world and helped to keep our country strong. American doctors and allied professions have worked toward great public health goals. Epidemics of diphtheria, smallpox, typhoid, and scarlet fever have been conquered. Yes, man's average life span has been extended

thirty-three years. The humanitarian and scientific achievements of men under the American medical system are bringing a sick world new hope and new health.

The voluntary way is the American way—almost all Americans instinctively know this. It is the plan whereby the physician has the interest and welfare of his patients at heart. It is a superior plan to that in which the physician sees eighty patients in four hours. Our country alone, among all the great nations of the world, still has opportunity and a great measure of individual liberty. If the fight against state socialism is lost here, the light of liberty will go out all over the world. The Compulsory Health Insurance Plan is a fast step toward a regimented state. People who want America in political control have a short memory of American history and a shorter vision for the future of America. The good common sense and love of liberty of the American people will defeat such plans as "socialized medicine."

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#### Criss Award Given for Work In Medicine

Because of their brilliant work in the development and use of Cortisone, Dr. Phillip S. Hench and Dr. Edward C. Kendall of the Mayo Clinic were named joint winners of the first Mutual of Omaha \$10,000 Dr. C. C. Criss Award for outstanding contributions in the fields of public health and safety. Presentation of the award was made at the meeting of the American Rheumatism Association at Atlantic City on June 9. Dr. E. L. Henderson, president of the American Medical Association, introduced Dr. N. L. Criss, medical director and treasurer of Mutual of Omaha, who honored each of the winners with \$5,000 and a gold medal.

The Dr. C. C. Criss Award was created in 1949 in honor of the founder and chairman of the Board of Mutual of Omaha, world's largest exclusive health and accident insurance company. Dr. N. L. Criss, brother of Mutual's founder, said: "It is our hope that this annual Award will stimulate and encourage others in the field of health and public safety and that the work of Dr. Hench and Dr. Kendall will serve as an example to other men to continue experimentation and scientific developments in these fields for betterment of the world."

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#### New, Safe Curare-Like Drug Developed For Use In Surgery

A new drug called Mytolon, which makes deep anesthesia unnecessary when muscles must be relaxed in the course of surgery, has been developed and found clinically useful in surgical operations.

Mytolon has been proved more potent and safer than natural curare, the paralyzing and deadly arrow poison of the Amazon Indians which has been used in diluted and modified form for such purposes.

Mytolon will shortly be introduced nationally by Winthrop-Stearns, Inc. It will be made available to surgeons in 5 cc. ampuls containing 3 mg. per cc. Average dose during surgery is from 3 to 9 mg.

## BULLETIN BOARD

### JAMES WALKER MEMORIAL HOSPITAL POSTGRADUATE PROGRAM

The 1951-52 program of year-round postgraduate medical education at James Walker Memorial Hospital in Wilmington has been announced by John W. Rankin, director of the hospital. "This year-round series of visits to our hospital," stated the director, "is designed to bring to us and to the physicians of Southeastern North Carolina outstanding teachers and leaders in the medical profession."

At the daily conferences from 5 to 6 p.m. and at the clinicopathologic conference held each Wednesday at 7:30 p.m., licensed physicians and medical students are cordially invited to be present. There is no charge or registration fee of any kind for physicians attending these conferences, but all physicians residing outside of New Hanover County are requested to register at the information desk in the lobby of the James Walker Hospital. The program is as follows:

#### Visiting Chiefs, 1951-1952

##### July 31 - August 3, 1951

Dr. Amos Christie—Professor of Pediatrics, Vanderbilt University School of Medicine, Nashville, Tennessee.

##### August 14 - 17, 1951

Dr. Frederick L. Good—Emeritus Professor of Obstetrics, Tufts College Medical School, and Chief of Obstetrics and Gynecology at Boston City Hospital and St. Elizabeth's Hospital, Boston, Massachusetts.

##### September 4 - 7, 1951

Dr. R. B. Raney—Associate Professor of Surgery (Orthopedics), Duke University School of Medicine, Durham, North Carolina.

##### October 2 - 5, 1951

Dr. Gordon P. McNeer—Associate Attending Surgeon, Memorial Hospital for the Treatment of Cancer and Allied Diseases, New York, N. Y., and Consultant in Gastroscopy at Roosevelt Hospital, New York.

##### November 6 - 9, 1951

Dr. John Adriani—Director, Department of Anesthesia, Charity Hospital, New Orleans, and Assistant Professor of Surgery (Anesthesia) Tulane University of Louisiana School of Medicine, New Orleans, Louisiana.

##### December 4 - 7, 1951

Dr. Thomas P. Goodwyn—Associate Professor of Clinical Surgery Emory University School of Medicine, Atlanta, Georgia.

##### January 8 - 11, 1952

Dr. John A. Boone—Professor of Medicine, Medical College of the State of South Carolina, Charleston, South Carolina.

##### February 5 - 8, 1952

Dr. Emil Novak—Assistant Professor of Gynecology, Johns Hopkins University School of Medicine, Baltimore, Maryland.

##### March 4 - 7, 1952

Dr. Waldo E. Nelson—Professor of Pediatrics, Temple University School of Medicine, Philadelphia, Pennsylvania.

##### April 1 - 4, 1952

Dr. Jack D. Myers—Assistant Professor of Medicine, Duke University School of Medicine, Durham, North Carolina.

#### May 6 - 9, 1952

Dr. William F. Rienhoff, Jr.—Associate Professor of Surgery, Johns Hopkins University School of Medicine, Baltimore, Maryland.

#### June 3 - 6, 1952

Dr. Harry Walker—Associate Professor of Clinical Medicine, Medical College of Virginia, Richmond, Virginia.

### BOARD OF MEDICAL EXAMINERS OF THE STATE OF NORTH CAROLINA

A meeting of the State Board of Medical Examiners, for the purpose of interviewing applicants for licensure by endorsement of credentials, will be held Saturday, July 28, at the Atlantic Beach Hotel, Morehead City, North Carolina. The board will convene at 9 a.m.

### NORTH CAROLINA TUBERCULOSIS ASSOCIATION

Alton S. Pope, M.D., of Newtonville, Massachusetts, now heads the National Tuberculosis Association, with Sidney J. Shipman, M.D., of San Francisco, California, assuming the post of president-elect. Dr. Pope succeeds Dr. David T. Smith of Duke University. New vice presidents are Mark H. Harrington, Denver, Colorado, and Dr. Howard M. Payne of Washington, D. C.

Secretary of the organization is Kemp D. Battle of Rocky Mount, North Carolina. Mr. Battle is a former president of the North Carolina Tuberculosis Association and has been a NTA Board Member for two years. Collier Platt of New York City was renamed treasurer.

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Roland L. Garrett of Elizabeth City was recently elected president of the North Carolina Tuberculosis Association, succeeding Dr. Herman F. Easom of Wilson. Other officers for the 1951-52 term include Elizabeth Smith, Goldsboro, vice president; Mrs. Leslie Barnhardt, Charlotte, secretary; T. W. Steed, Raleigh, treasurer. Dr. George T. Harrell, Winston-Salem, Dr. A. Derwin Cooper, Durham, and Ralph H. Scott, Burlington, were elected as members of the executive committee.

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Dr. R. B. C. Franklin of Mount Airy has succeeded Dr. M. D. Bonner of Jamestown as president of the North Carolina Trudeau Society. Other recently elected officers were: Dr. E. E. Menefee, Jr., of Duke University School of Medicine; Dr. Hege Kapp of Winston-Salem.

### NEWS NOTES FROM THE DUKE UNIVERSITY SCHOOL OF MEDICINE

Dr. W. C. Davison, dean of the Duke University Medical School, has returned from a six week inspection of the Atom Bomb Casualty Commission, this country's long-range medical study of what happened to the Japanese survivors of the atom bombings in Hiroshima and Nagasaki.

Although it is too early to know definitely, the dean stated, early data shows that two conditions have occurred at "higher than usual rates":

1. Cataracts of the eye are more numerous among those who survived.

2. Leukemia (blood cancer) has been more frequent.

"It should be emphasized however," said Dr. Davison, "that these data represent only a relative increase, and that the total incidence is extremely low."

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A special "carbon dioxide" treatment for nervous disorders, begun at Duke Hospital six months ago, has been effective 86 per cent of the time, Dr. George A. Silver, associate in neuropsychiatry, said recently. The Duke psychiatrist described results obtained with 50 patients at the 1951 Duke Post-graduate Course.

Patients inhale the gas, a mixture of 70 per cent oxygen and 30 per cent carbon dioxide, much as patients in the operating room receive anesthesia. "The treatment is easy to administer, safe, and inexpensive," Dr. Silver told the physicians.

Improvement has come to alcoholics and stutterers, and to patients with asthma, allergic skin reactions, and other conditions when they are linked with emotional upsets.

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Dr. Clarence E. Gardner, Jr., professor of surgery, has been elected to the examining board of the American Board of Surgery, Dean W. C. Davison announced recently. Membership on the board is limited to thirteen surgeons in the United States. Dr. Gardner will serve for six years.

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More than a score of scientists from all over the world have begun a four week graduate course in medical mycology, the study of fungus disease, at the Duke University School of Medicine. Directed by Dr. Norman F. Conant, professor of mycology, and director of the Duke Fungus Registry, the course provides student-scientists with a working knowledge of human fungi.

Students work with patients, clinical material, cultures and laboratory animals. This is the fourth year the course has been offered at Duke since it was begun in 1948 in response to requests from scientists all over the world. It is an outgrowth of Duke's Fungus Registry, one of the world centers of diagnosis and study of fungus disease. Dr. Conant returned last month from an eight week lecture tour of Europe, where he spoke on mycology at medical centers there.

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Duke Hospital may have to close some of its beds or turn away some patients unless the current nursing shortage here can be met, F. Ross Porter, superintendent, has announced. During the month of May the hospital census was highest since the war-time peak in 1946, Porter said. The census this month is running well over 500 bed patients per day. Duke needs registered nurses immediately for full-time work, but those who could do only part-time work would be of "immeasurable value."

Porter, who is president of the North Carolina Hospital Association, said that the situation is similar in most other hospitals in the state and over the nation. "However," he added, "the larger general hospitals are in some cases feeling the shortage more acutely than others, as both civilian and military demands for nursing care continue to increase."

## NEWS NOTES FROM BOWMAN GRAY SCHOOL OF MEDICINE OF WAKE FOREST COLLEGE

Dr. Robert L. McMillan, associate professor of clinical internal medicine, has been notified of his successful completion of the examinations of the American Board of Cardiology and is now a qualified specialist in that field.

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An exhibit on "Phospholipide Turnover in the Liver Determined by Radioactive Phosphorus" prepared at Bowman Gray School of Medicine won the silver award at the meeting of the American Medical Association in Atlantic City, New Jersey. The

exhibit is based on three years of research performed jointly by Dr. David Cayer of the department of internal medicine and Dr. W. E. Cornatzer of the department of biochemistry. Members of the department of medical illustration, under the direction of A. Hooker Goodwin, prepared the drawings, photographs, and wax models which make up the exhibit.

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Dr. Frank R. Lock, professor of obstetrics and gynecology, has been made associate dean of Bowman Gray School. He recently succeeded Dr. C. C. Carpenter, dean, as medical director of North Carolina Baptist Hospital.

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Dr. W. E. Cornatzer, assistant professor of biochemistry since 1946 and a member of the 1951 graduating class at the medical school, has resigned to become professor of biochemistry and head of the new department at the University of North Dakota School of Medicine.

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The school awarded sixty-one M.D. degrees and one M.S. degree at commencement exercises on June 10 and 11. The Weirstein award in obstetrics and gynecology went to Dr. Charles Hines Daugherty of Tulsa, Oklahoma, and the Shepardson award to Dr. Horace William Miller, Jr., of Asheville.

## NEW HANOVER COUNTY MEDICAL SYMPOSIUM

The fifth annual medical symposium, sponsored by the New Hanover County Medical Society, will be held at Wrightsville Beach, Friday, August 24, 1951. The one day symposium will begin at 10:00 a.m., with registration and all meetings held at Lumina Pavilion.

At 6:30 p.m., attending physicians will be guests at a barbecue supper. In addition, the Auxiliary to the New Hanover County Medical Society is planning a "Dutch" noon-day luncheon for wives.

Principal speakers, as announced by society officers are: Dr. Hans Selye, professor and director of the Institute of Experimental Medicine and Surgery at Universit  de Montreal, who will speak on "Cortisone and ACTH"; Dr. Charles F. McKhann, professor of pediatrics, Western Reserve School of Medicine, whose subject will be "Convulsive Disorders"; Dr. John Pemberton, professor of surgery at the Mayo Clinic, who will discuss "Carcinoma of the Thyroid"; Dr. Isaac S. Tassman, associate professor of ophthalmology and chief of the ophthalmology clinic, Graduate School of the University of Pennsylvania, whose subject will be "Fundus Changes in Vascular Disorders"; and Dr. Robert W. Johnson, Jr., professor of orthopedic surgery, Johns Hopkins Hospital, who will speak on "Arthritis."

Officers of the New Hanover County Medical Society are Dr. E. C. Anderson of Wilmington, president, and Dr. W. F. Barefoot of Wilmington, secretary.

## UNION COUNTY MEDICAL SOCIETY

Dr. R. H. Garren, Monroe eye and ear specialist, was honored upon the completion of his fiftieth year of practice of medicine by the Union County Medical Society at Hotel Monroe recently.

Dr. Charles H. Pugh, president of the Seventh District Medical Society, Dr. Lucius N. Glenn and Dr. M. G. Anders of Gastonia, and Dr. J. H. Hemphill of Charlotte, plus the full membership of the county society, were present to celebrate "Dr. Garren Night," in recognition of his long and outstanding years in the practice of medicine. Dr. J. G. Faulk was in charge of the program, and was host to the society for a delicious steak dinner.

Dr. Garren was born in Buncombe county on December 6, 1872, the son of Joseph R. Garren and

Linda Calyton Garren. He attended Rutherford College in 1895-96 and graduated from the University of North Carolina with the class of 1898. He received his medical degree from the University of Tennessee in 1900.

He practiced medicine in Old Fort and Bessemer City for 15 years and came to Monroe in 1916 where he engaged in general practice until 1920. In that year he studied at the New York Postgraduate College and New York Eye and Ear Hospital and upon his return to Monroe specialized in the treatment of eyes and ears.

#### NATIONAL SOCIETY FOR CRIPPLED CHILDREN AND ADULTS

Alpha Chi Omega, national women's fraternity, and the National Society for Crippled Children and Adults, the Easter Seal Agency, jointly announced last month the names of six recipients of specialized scholarships in cerebral palsy. Included in the group was Murray H. Halfond, speech pathologist in the Department of Neuropsychiatry, Duke University School of Medicine, Durham, North Carolina.

The scholarship program, sponsored by both organizations, is part of a nationwide plan undertaken three years ago by the National Society and Alpha Chi Omega to help relieve the critical shortage of trained specialists needed to treat hundreds of thousands of cerebral palsied children and adults. Under this program, physicians, therapists, and educators receive graduate training in cerebral palsy.

#### NATIONAL FOUNDATION FOR INFANTILE PARALYSIS

The National Foundation for Infantile Paralysis announces a new type of short term predoctoral fellowships for undergraduate medical students who are interested in research in medicine and the related biologic and physical sciences. The fellowships cover a minimum of two months experience in research under the direction of a competent investigator in the laboratories of approved medical schools or research institutes in the United States.

Under the plan, the dean of each four year medical school has the privilege of nominating one medical student to receive a fellowship. The National Foundation for Infantile Paralysis will provide a stipend of \$400 for each student who qualifies for the summer laboratory study.

#### AMERICAN HEART ASSOCIATION

##### Dr. Louis N. Katz Becomes President of Association

Dr. Louis N. Katz, director of cardiovascular research, Michael Reese Hospital, Chicago, was elected president of the American Heart Association for the 1951-1952 term, and the wife of the Vice President of the United States, Mrs. Alben Barkley, became a vice president at the annual meeting of the Association in June. Dr. Katz succeeds Dr. Howard B. Sprague of Brookline, Massachusetts, who, by custom, will become chairman of the Association's Scientific Council.

Dr. Irving S. Wright, professor of clinical medicine, Cornell University, New York, was chosen president-elect for the 1952-1953 term at a meeting of the Association's Assembly, composed of delegates of affiliated heart associations throughout the country and representatives of the Association's Scientific Council. Dr. Wright is president of the New York Heart Association.

#### Gold Heart Awards

Gold Heart Awards for outstanding contributions in the field of heart and blood vessel disease and in furthering the program of the American Heart Association, were presented last month at the Annual Dinner of the Association, at the Haddon Hall Hotel. Dr. Louis N. Katz, Chicago, newly designated president, presented the awards to Dr. James B. Herrick, emeritus professor of medicine at the University of Chicago and the University of Illinois; Dr. Frank N. Wilson, professor of medicine, University of Michigan; and Dr. H. M. Marvin, associate clinical professor of medicine, Yale University.

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#### First Career Research Investigator Appointed

In announcing the appointment of Dr. Victor Lorber of Cleveland, Ohio, as its first Career Investigator, the American Heart Association recently became the first voluntary agency to undertake a program providing for continuing careers of scientific research investigators of proved ability and originality.

Dr. Lorber, associate professor of biochemistry at Western Reserve University, will receive a starting annual stipend of \$12,000 to conduct research relating to disorders of the heart and blood vessels. It is the intention of the Association to continue this support throughout the productive life of the Investigator.

In making the announcement, Dr. Louis N. Katz, president of the American Heart Association, pointed out that the Association has established this first of a series of Career Investigatorships as an important phase of its over-all national research program. This new type of research support, which has long been advocated by leading scientists in this country, makes it possible for investigators to devote life-long careers to medical research.

The Career Investigator, Dr. Katz said, is free to engage in research of his own choosing. He may work in any institution in the United States which offers adequate facilities. In addition to his annual stipend, a maximum of \$7,500 per year is made available to the Investigator for technical assistance and supplies. The institution where he chooses to work will receive \$1,000 annually for overhead.

#### INTERNATIONAL COLLEGE OF SURGEONS

The sixteenth annual assembly of the United States Chapter of the International College of Surgeons will be held in Chicago on September 10 through 13, 1951, with headquarters at the Palmer House.

An excellent program has been arranged. Prominent surgeons from the United States and other countries will participate. Scientific sessions will be held by all specialty sections of the United States chapter. The annual banquet will take place on Wednesday evening, September 12. Mr. Lawrence Abel, F.R.C.S. (Eng.), of London, will be the principal speaker.

The assembly will conclude with the convocation, to be held in the Civic Opera House on September 13. Senator Estes Kefauver will deliver an address on "The America of Tomorrow."

Hotel reservations may be arranged by writing to the Housing Division, Chicago Convention Bureau, 33 North LaSalle Street, Chicago 2, Illinois.

#### AMERICAN COLLEGE OF CHEST PHYSICIANS

The sixth annual postgraduate course in diseases of the chest sponsored by the Council on Postgraduate Medical Education and the Illinois State Chapter of the American College of Chest Physicians, will be presented at the St. Clair Hotel, Chicago, Illinois, September 24 through 28, 1951.



This course will emphasize the recent advancements in the diagnosis and treatment of chest diseases. The course is open to all physicians, but the number of registrants will be limited. Tuition fee is \$50.00; applications will be accepted in the order in which they are received. Applications should be sent to the American College of Chest Physicians, 112 East Chestnut Street, Chicago 11, Illinois.

### NEW YORK POLYCLINIC MEDICAL SCHOOL AND HOSPITAL

The most important guests were not present at the Hotel Claridge in Atlantic City on Tuesday, June 12, when the New York Polyclinic Medical School and Hospital honored Dr. Sidney V. Haas, staff professor of pediatrics, with a testimonial buffet supper, on the occasion of the publication of his *Management of Celiac Disease*. These guests were the 75,000 children Dr. Haas, now 81, has treated during his fifty-three years as a physician. Dr. Haas still practices pediatrics in New York City.

*Management of Celiac Disease* (Lippincott), published recently, represents the combined research efforts and experience of Dr. Sidney V. Haas and his son, Dr. Merrill P. Haas, also a pediatrician. Dr. Haas has a world-wide medical reputation as a pediatrician for establishing the value of the banana diet in the dreaded celiac disease and the use of atropin in pyloric spasm.

Many physicians attending the American Medical Association convention in Atlantic City were present at the testimonial honoring Dr. Haas.

### TWENTY-FOURTH ANNIVERSARY NUMBER OF THE HEBREW MEDICAL JOURNAL

The appearance of the Spring issue, Volume 1, 1951, of *The Hebrew Medical Journal* (Harofe Hivri) inaugurates the twenty-fourth successful year of its publication under the editorship of Moses Einhorn, M.D. Written in Hebrew, with English summaries, the *Journal* is a contribution to the development of the Hebrew medical literature, and thus aids the newly established Hebrew University Medical School in Jerusalem.

For further information, communicate with the editorial office of *The Hebrew Medical Journal*, 983 Park Avenue, New York 28, N. Y.

### CITIZENS COMMITTEE FOR THE HOOVER REPORT

Concerned over the medical unpreparedness of the nation and the uncoordinated use of the country's medical facilities, especially in the event of a foreign attack upon this country, twenty-one leading physicians, representing thousands of doctors, have petitioned Congress for consideration of measures to conserve medical and technical manpower.

The petitioners are all members of the National Advisory Board of the Doctors Committee for Improved Federal Medical Services, a nationwide committee of doctors of which Dr. Robert Collier Page of New York, medical director of Standard Oil Co. (New Jersey), is chairman. The committee is an affiliate of the Citizens Committee for the Hoover Report.

The joint statement was:

"Seriously concerned with the conservation and wise utilization of scarce medical manpower, with its direct effect upon national health, medical research and civilian defense, the doctors of America are vitally interested in the recommendations of the Hoover Commission on federal medical services.

"The bipartisan Hoover group's study showed that five major and thirty smaller government

agencies are independently carrying out diverse medical programs completely uncoordinated with one another. This has resulted in competition for doctors, nurses and technicians, wasted hospital facilities, unjustifiable expense to the citizen, and very often inferior services to beneficiaries.

"A clear-cut plan for correcting this condition was offered by the Hoover Commission. In the present situation where every effort should be made to secure the nation against any emergency, the need for study of this plan is more acute than ever.

"Therefore, we the undersigned, members of the National Advisory Board of the National Doctors Committee, urgently request Congress to give thorough and immediate consideration to the federal medical programs, so that steps can be taken to correct the grave deficiencies reported by the Hoover Commission."

Legislation on which the doctors urge consideration during this session is contained in Senate Bill No. 1140 and an identical House Bill No. 3305, which are based upon recommendations of the Hoover Commission's report. The bills are now before the Senate and House Committees on Expenditures in the Executive Departments. Their passage would create a federal Department of Health with the authority to unify under one control, the now independent and competing federal medical services, with great saving of money and the release of scarce doctors, technicians, and nurses for general practice.

### DEPARTMENT OF THE ARMY

#### Civilian Medical Care for Army Personnel

Medical service is provided for Army personnel in the United States generally by dispensaries, infirmaries, and hospitals located at the many Army installations throughout the country. Where Army or other United States federal medical treatment facilities are not available when medical service is required by Army personnel, however, the services of civilian physicians, clinics, and hospitals are necessary. The following criteria define the conditions under which individuals of the Army may be authorized civilian medical care at the expense of the Army.

Civilian medical care (other than elective) at the expense of the Army is authorized for commissioned officers, contract surgeons when employed by the Army on a full-time basis, warrant officers, enlisted personnel, cadets of the United States Military Academy, general prisoners, and prisoners of war when these personnel are on a duty status or when they are absent from their place of duty, on leave or informal leave (pass) status. Applicants for enlistment in the Army and selectees also are authorized necessary civilian medical care at the expense of Army funds while they are being processed for enlistment or induction into the Army. Payment by the Army for civilian medical expenses incurred by Army personnel who are absent without leave is not authorized.

Normally, civilian medical care for Army personnel is authorized only when there are no other federal medical treatment facilities available. First aid or emergency treatment is authorized at any time, notwithstanding the proximity of Army or other federal medical treatment facilities. In this connection, emergency medical care may be defined as that required to save life, limb, or prevent great suffering. Surgical operations should not be performed without prior approval of military authorities, unless indicated as an emergency procedure.

Elective medical treatment in civilian medical treatment facilities or by civilian physicians will not be authorized.

Civilian medical care of dependents of military personnel from civilian sources, at Army expense, is not authorized. Dependents of military personnel may obtain available medical care at Department of Defense medical facilities only.

As a general rule, local military commanders will furnish the civilian medical agency with prior written authority for ordinary medical care to Army personnel under his jurisdiction. In such cases, prior arrangements with the civilian medical agency will be made by the individual or by a proper military authority. For emergency cases treated without prior written authorization, the surgeon of the nearest military command should immediately be notified by the civilian medical agency, giving the individual's name, organization, nature of illness or injury, and statement of the practicability of transfer of the patient to an Army or other governmental hospital. The civilian agency or physician then will be advised without delay by the appropriate authorities as to procedures to be followed.

Bills for authorized medical care and treatment of Army personnel should be submitted to the commanding officer of the organization to which the patient belongs, or to the military authority who provided the authorization for the medical service. If the location of these individuals is not readily known, or if such military commanders authorizing treatment have moved to another station, the bill should be sent to the military authority listed below.

For services rendered in the THIRD ARMY AREA, including Alabama, Florida, Georgia, Mississippi, North Carolina, South Carolina, and Tennessee, submit bills to: The Surgeon, Third Army, Fort McPherson, Georgia.

The bill should show the full name, rank, and service number of the patient, place, and inclusive dates of treatment, diagnosis, and charges, all itemized separately. The duty status of the patient at the time of illness or injury also should be shown, such as duty, leave, or pass. Payment will be expedited if the following certificate is typed on the bill and signed:

"I certify that the above charges are correct and just; that payment therefor has not been received; that the services were necessary in the care and treatment of the person named above; that the services were rendered as stated; and that the charges do not exceed those customarily charged in this vicinity."

.....  
(Signature of Payee)

.....  
(Title or Capacity)

Further information may be requested of the military surgeon at the above address or from The Surgeon General, Department of the Army, Washington 25, D. C.

#### **Improved Methods of Treating Frostbite Recommended by Army Military and Civilian Experts**

A team of military and civilian experts who spent a month in Japan and Korea studying frostbite cases have recommended improved methods of treating this type of injury. Principal methods suggested for treating frostbite include rest in bed and no smoking for all patients, daily foot care with a mild, non-irritating cleansing agent, a hospital ward temperature maintained between 72 and 78 degrees, the use of penicillin during evacuation for treat-

ment and employment of other antibiotics during treatment, and the delay of surgery until there is no question of demarcation of the affected part.

\* \* \*

#### **General Bliss Honored**

After almost forty years of continuous Army medical service, climaxed by the last four years as Surgeon General, Major General R. W. Bliss was presented a testimonial by Secretary of the Army Frank Pace, Jr., at ceremonies held in the Pentagon, May 31.

\* \* \*

#### **Major General Armstrong Takes Oath As Surgeon General of the Army**

Major General George E. Armstrong was sworn in June 6 as Surgeon General of the Army, at a ceremony in the office of General J. Lawton Collins, Chief of Staff of the Army. Major General William E. Bergin, the Acting Adjutant General, administered the oath. General Armstrong succeeds Major General Raymond W. Bliss whose retirement from the Army after 40 years' service became effective May 31.

#### **DEPARTMENT OF DEFENSE**

##### **Low Death Rate of Enemy Prisoners Due to Army Medical Service Treatment**

Death among North Korean and Chinese Communist prisoners of war treated by the United States Army Medical Service at hospitals in Korea for battle wounds and injuries, over a six months' period, have been only 7 per cent, the Department of the Army announced recently.

"Judging by the high incidence of disease among captured Communist troops, the practice of preventive medicine is not being carried out effectively in their forces," according to Brigadier General James S. Simmons, U.S.A. retired, formerly Chief of the Preventive Medicine Division, Office of the Army Surgeon General and now Dean of Harvard University's School of Public Health. "Captured POW's have had an unduly high incidence of diseases, including leprosy, smallpox, typhus, typhoid, tetanus and other epidemic diseases."

The low and often nonexistent standards of medical care provided by the enemy for their own casualties has also added to the United States Army Medical Service difficulties in Korea. Even at best, standards of treatment have been low in the Communist forces, with undergraduate medical students filling most medical officers' positions. Little or no provision has been made for drugs, equipment, or evacuation of casualties. Frequently, however, the enemy has shown utter indifference to the value of human life, and wounded men are left to die, with no treatment of any kind. While the net result is a depletion of enemy forces, it creates highly complicated and involved cases for the Army.

"To neglect or mistreat prisoners of war would reduce us to the ethical level of the enemy," General Armstrong said, "and in the end the prestige of our country and of the other United Nations would inevitably suffer in the eyes of history. The International Red Cross has sent representatives to our prisoner of war hospitals who have, without exception, praised enthusiastically what we are doing for such prisoners. This is in contrast to the enemy's refusal to permit representatives of the International Red Cross so much as to enter the North Korean area."

\* \* \*



### Dr. Spencer Named Director of Committee on Medical Sciences

Appointment of Dr. Thomas B. Spencer as executive director of the Committee on Medical Sciences, Research and Development Board, Department of Defense, has been announced by Dr. Lowell T. Coggeshall, chairman of the committee. Dr. Spencer succeeds Dr. Joseph M. Pisani, who will become assistant dean and instructor in medicine of the State University Medical Center at New York City. Dr. Spencer's home was originally in Charlotte, North Carolina.

\* \* \*

### Dr. Alfred R. Shands, Jr., Named Member of Armed Forces Medical Policy Council

The Secretary of Defense, General Marshall, recently announced the appointment of Dr. Albert Rives Shands, Jr., as a member of the Armed Forces Medical Policy Council effective July 1, 1951. Dr. Shands will occupy the position on the Council formerly held by Dr. W. Randolph Lovelace, II, who accepted, effective July 1, the appointment as chairman of the council.

Dr. Shands is medical director of the Nemours Foundation and surgeon in chief of the Alfred I. duPont Institute of Wilmington, Delaware. He has been a civilian medical consultant to the Surgeon Generals of the three services. A graduate of the University of Virginia Medical School, Dr. Shands is a former professor of surgery at Duke University. He is a visiting professor in orthopedic surgery at the University of Pennsylvania.

\* \* \*

### Dr. Blake Appointed By Army to Medical Research and Development Board

Dr. Francis G. Blake, Sterling Professor of Medicine at Yale University School of Medicine, has been appointed scientific director, Medical Research and Development Board, Office of the Army Surgeon General, the Department of the Army has announced.

### FEDERAL SECURITY AGENCY National Cancer Institute

Cancer of the skin is 95 per cent curable when it is diagnosed and treated properly in its early stages, according to **Cancer of the Skin**, one of two pamphlets recently published by the Cancer Institute of the National Institutes of Health. Both publications were prepared as part of a cooperative effort with the American Cancer Society to promote public knowledge of how best to combat cancer.

The other pamphlet, entitled **Cancer of the Genito-Urinary Tract**, also emphasizes the urgency of early diagnosis and treatment of cancer. Genito-urinary cancer is one of the most common types of cancer in men, accounting for one-fifth of all male deaths due to cancer. One warning that should never be ignored is blood in the urine. While this does not necessarily indicate cancer, it should be brought to the immediate attention of a physician. The pamphlet particularly urges men past 50 to have regular physical check-ups.

Other skin conditions which should be particularly watched are: keratosis, a dry scaly patch usually darker than the surrounding skin, especially when accompanied by bleeding; changes in moles, particularly dark brown or blue-black, which sometimes develop into a rare but extremely serious form of cancer known as malignant melanoma; and leukoplakia, a white scaly thickening of the lip or membranes of the mouth.

Pastes, ointments, or advertised cures are especially dangerous in the treatment of skin cancer, the pamphlet emphasizes, since any self-treatment is likely to alter the appearance of the skin and

make diagnosis difficult. At the present time, there are only three accepted cures for cancer of the skin or any other site. These are surgery, x-ray, and radium.

Personal alertness to the signs and symptoms of cancer are emphasized throughout both of the recently published pamphlets as well as the other five of a series prepared by the National Cancer Institute, in cooperation with the American Cancer Society. The first of these publications, **Cancer—What to Know, What to Do About It**, discusses the cancer process, the known facts about its causes, the areas in which it appears, and the recognized treatments.

(BULLETIN BOARD CONTINUED ON PAGE 308)

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## BOOK REVIEWS

**The Neuroses.** By Walter C. Alvarez, M.D., Professor of Medicine, Emeritus, Mayo Foundation, University of Minnesota; Emeritus Consultant in Medicine, The Mayo Clinic. 667 pages. Price, \$10.00. Philadelphia and London: W. B. Saunders Company, 1951.

Perhaps no other doctor throughout his whole medical lifetime has been more intensely interested in the so-called neurotic patient than has Dr. Walter Alvarez. Although he is certified as a gastroenterologist, he is concerned with the patient as a whole, and is especially sympathetic with the sensitive, high-strung, overconscientious people who make up such a large proportion of medical practice, but who are often brushed off with scant sympathy, or even with ill-concealed impatience. Over the years Dr. Alvarez has learned how to deal with these patients so as to inspire their confidence and to give them new hope. In this book he shares with his readers the experience thus gained. As he says in the preface, it is written by a non-psychiatrist for non-psychiatrists. It is a veritable postgraduate course in the diagnosis and treatment of functional diseases.

The book is divided into six parts. Part I, the introduction, stresses the need for a better recognition of the neuroses and minor psychoses, because of their prevalence and because they are so often overlooked. Part II, on diagnosis, gives numerous hints for recognizing the neurotic patient, and for separating the wheat from the chaff in taking histories and in ordering laboratory tests. Part III deals with the causes of neuroses and psychoses. One of the most important chapters in this part is the twelfth—"Little Strokes, a Common Cause of Nervous Syndromes." Part IV discusses types of personality and several syndromes. Of particular interest in this section is the chapter on headaches.

Part V takes up the psychosomatic features of the several specialties including pediatrics. Part VI, on treatment, is perhaps the most valuable—especially chapter 26, "The Art of Convincing a Patient that His Troubles Are of Nervous Origin," and chapter 27, "What Can the Patient Do to Help Himself?"

This reviewer would like to offer an objection to the summary dismissal of the x-ray finding of hyperostosis frontalis interna as "usually harmless." It is true that many experienced clinicians would agree; but there are many who are convinced that it represents a real clinical entity.

Another protest is offered against the cavalier dismissal of belladonna and phenobarbital. So many experienced gastroenterologists have found these drugs helpful in treating their patients that it is hard to believe their effect is altogether upon the psyche of both doctors and patients. It may be that in combination they have a synergistic action, even in relatively small doses.

These minor differences of opinion are not intended to detract from the real value of the book. In it Dr. Alvarez puts into plain, everyday talk the accumulated experience gained from seeing thousands of patients. To him patients are never "cases," but human beings in need of help. Only a keen observer and an experienced clinician who genuinely liked people could have written such a book. Every doctor who really wants to learn to recognize and to treat the neuroses would do well to purchase and read it from cover to cover, then put it close to his desk where he can refer to it again and again.

**Principles and Practice of Obstetrics.** (Originally by Joseph B. DeLee, M.D.) By J. P. Greenhill, M.D., Attending Obstetrician and Gynecologist, The Michael Reese Hospital; Obstetrician and Gynecologist, Associate Staff, The Chicago Lying-In Hospital; Attending Gynecologist, Cook County Hospital; Professor of Gynecology, Cook County Graduate School of Medicine. Ed. 10. 1020 pages, with 1140 illustrations on 864 figures, 194 in color. Price, \$12.00. Philadelphia and London: W. B. Saunders Company, 1951.

This textbook continues to be a standard reference for students and practitioners of obstetrics. Dr. Greenhill has extensively revised the previous edition, and references to the obstetrical literature have been brought up to date. An interesting and timely chapter by Helene Deutsch concerning the psychologic aspects of childbearing has been added, and recent developments in chemotherapy, erythroblastosis, abortion, and the management of the medical diseases complicating pregnancy have been incorporated. The organization of the text is appropriate, and the obstetric teachings represent years of collective clinical experience in the "Chicago School." The edition is extraordinarily well illustrated and is adequately indexed.

**Natural Childbirth.** By Frederick W. Goodrich, Jr., M.D., 168 pages. Price, \$2.95. New York: Prentice-Hall, Inc., 1950.

In the early pages of this manual for expectant mothers, natural childbirth is defined as "intellectual, physical, and emotional preparation for childbirth, to the end that mothers realize their potentialities and in so doing enjoy the bringing forth of their babies." The implication in subsequent chapters is that fear not only lowers the threshold of pain, but actually causes a profound disturbance in the physiology and course of labor. The lay reader will accept this idea more readily than will the student of uterine physiology. Many practicing obstetricians will recognize the good results obtained by Dr. Goodrich and his associates while finding it difficult to accept their reasoning as to the mechanism employed. Some will question the scientific soundness of the idea that pelvic rocking, perineal exercises, or abdominal breathing could change the course of labor or even indirectly prevent cervical dystocia. The advice to practice daily relaxation of all muscles including those of the face, saying to oneself "let go, let go," will seem to many members of the medical profession a method of self-hypnotism.

If the author would report a series of cases in which other rituals were tried and failed, it would relieve the practitioner of an uneasy feeling of intellectual dishonesty in trying to explain natural childbirth to his patients.

Though the author stresses the importance of preparation for labor, he does not neglect the instruction given in the usual manual for expectant mothers. Details of anatomy and physiology are presented, with several very helpful illustrations. The chapters dealing with prenatal care discuss the history, physical examination and laboratory tests of the first office visit, and deal tactfully with such controversial issues as diet and the minor complications such as nausea and constipation. The fetal and maternal changes in each trimester are discussed, and the hygiene of each trimester is well presented. A chapter each is devoted to relaxation exercises, the physiology of labor, the psychology



of labor, the postpartum period, and going home. Both breast feeding and the rooming-in plan are favorably presented.

On the whole, this book is pleasingly written, and shows much insight in dealing with the lay reader's difficulties in understanding the technicalities of the subject. It will no doubt give the reader an intelligent and enthusiastic approach to prenatal care, labor, delivery, and the postpartum period.

**A Textbook of X-Ray Diagnosis.** By British Authors in Four Volumes. Ed. 2. Edited by S. Cochrane Shanks, M.D., Director, X-Ray Diagnostic Department, University College Hospital, London; and Peter Kerley, M.D., Director, X-Ray Department, Westminster Hospital; Radiologist, Royal Chest Hospital, London. About 2,568 pages, with illustrations. Price, \$55.00 the set. Philadelphia and London: W. B. Saunders Company, 1950-51.

The publication, in four volumes (Volume I on the head and neck, Volume II on the chest, Volume III on the abdomen, Volume IV on the bones and joints), of the second edition of Shanks' and Kerley's *Textbook* brings together in one unit the contemporary aspects of the entire field of diagnostic radiology. Such a work as this must be reviewed from several points of view, as there is no simple way of characterizing such an exhaustive treatise. Readability is an important characteristic of any medical work to which reference may frequently be made, and the usefulness of such a work will probably be directly related to this quality. The numerous English authors contributing to this work use a direct, clear, conversational style which, in the reviewer's opinion, is much more to be desired than the dry cataloguing of descriptive and diagnostic data.

Such a work not only must be readable, but the information which it contains must be easy to find. Comprehensive indexes serve this purpose, and tables of contents make it easy for the reader to refer to general subject material.

It is to be expected, also, that such a work will be complete. The reviewer has made numerous tests of this completeness and has not failed to locate the information sought. This work, therefore, is not disappointing in this respect. For example, reference is made to Albright's description of the absence of the normal shadow of the lamina dura in hyperparathyroidism.

The illustrative material is generous in amount, excellent in quality, and apt in selection. Illustrations are made with both the normal density relations, as seen on the ordinary x-ray film, and, in many instances, with the densities reversed, as is common in many medical publications. This is neither objectional nor confusing to the radiologist, and it should not be to others. The format is handsome, and each volume can be held comfortably. This reviewer is impatient with large, unwieldy volumes, and the publication of this work in four volumes rather than two or three is an asset. (The volumes may be purchased separately.) The paper is heavy and the typography excellent.

This is a work which will find its way into the library of most radiologists. Its usefulness, however, is not limited to radiologists, for it is a definitive reference work of the sort which ought to be on the shelves of any general or other practitioner making diagnostic x-ray studies.

**An Introduction to Universal Serologic Reaction in Health and Disease.** By Reuben L. Kahn. 155 pages. Price \$3.50. New York: Commonwealth Fund, 1951.

This text presents the universal serologic technique with lipid antigen as developed by Dr. Kahn in the past quarter of a century, as well as an interpretation of its significance in health and disease. The technique is comprised of nine quantitative precipitation systems, each carried out with a different concentration of sodium chloride. The final results are based on the correlation of three readings, the first without incubation and the remaining two after incubation in the ice box (3 to 5 C.) for four hours and twenty-four hours respectively. The reading scale is the same as in the Kahn test, and the results are condensed into a graphic presentation based on semilogarithmic coordinates.

The first chapter of the book is concerned with the development of the technique, and provides an excellent historical background. Chapters 2 through 9 consider the universal serologic reaction in different normal human beings, in the same human beings at different time intervals, in different animals, and in syphilis, yaw, leprosy, malaria, and tuberculosis. Numerous charts showing the serologic patterns obtained are presented. In chapter 10 a limited study of serologic patterns obtained with the universal serologic technique in children institutionalized for developmental retardation, hydrocephalus, and other brain defects is discussed. Further technical studies using different serum, antigen ratios and two different antigens are considered in chapter 11. In chapter 12 the author discusses the nature and significance of the universal serologic reaction.

As Dr. Kahn points out: "The reaction gives indication of being of practical value in the study of human and animal health and of different diseases. It has not yet reached the stage of practicability to be reported routinely to physicians. The reaction has reached the stage where it can be utilized jointly by the clinic and the laboratory in extending the serologic studies presented in this volume and in bringing to light the precise value and limitations in human and animal health and in various diseases."

Although this book will probably be most useful to the immunologist and others specifically interested in this particular field, the physician can also gain a very useful understanding of the universal serologic reaction from this text.

**The spirit of science** also is needed in a troubled world. We need a rededication to the ideals of truth and justice. We need to remember that science dedicates itself to the discovery, organization and humanization of truth. We need intellectual integrity, not mere mental cleverness. We need wisdom—knowledge with the capacity to use it; we need clearer perception of objectives and the best means of attaining them; we need perspective in human affairs. We need to apply the rigid standards of scientific truth to the solution of human problems. We need to try to learn, not only how, but also why, people and peoples think, feel, and act as they do. Then we need to put ourselves in their place and contemplate the meaning of the Golden Rule, of a simple code of ethics. We need the scientific method and the scientific attitude in acquiring knowledge regarding human problems; we need to use that knowledge as a basis for wisdom and ethical conduct.—Stakman, E. C.: *Science and Human Affairs*, Science 113: 137 (Feb.) 1951.

## BULLETIN BOARD

(CONTINUED FROM PAGE 305)

### Public Health Service

Appointment of Dr. Dale C. Cameron as chief of the Cooperative Health Services Branch of the Division of Industrial Hygiene, Public Health Service, has been announced by Surgeon General Leonard A. Scheele of the Public Health Service, Federal Security Agency.

Formerly Assistant Director of the National Institute of Mental Health, Dr. Cameron has recently completed a one year postgraduate course at Johns Hopkins University, where he was awarded the degree of Master of Public Health. Prior to that, he served for one year as consultant to the fact-finding staff of the Midcentury White House Conference on Children and Youth, assisting in the preparation of the health section of the fact-finding report.

\* \* \*

Successful results of a "trial run" to determine how quickly a vaccine might be produced in sufficient quantity to help prevent nationwide epidemics of especially virulent strains of influenza virus have been reported by Dr. W. Palmer Dearing, Acting Surgeon General of the Public Health Service.

In making the report, Dr. Dearing said that he was also speaking on behalf of the Surgeons General of the Army, Navy and Air Force, who for the past three years have participated in a cooperative program to investigate influenza outbreaks in this country.

Using a virus strain flown from England last January, 1,000 doses of vaccine were prepared by one pharmaceutical house within twenty-two days, by another in twenty-three days. Hitherto, six months to a year would have been needed for such preparation.

Preliminary estimates, said Dr. Dearing, indicate that a single laboratory could, with early isolation of a new strain, produce as many as one million doses of the vaccine within five weeks.

The influenza virus from which the vaccine was prepared was an A-prime strain isolated in London by Dr. C. H. Andrewes, head of the World Health Organization Strain Study Center.

\* \* \*

Appointment of Dr. Jack C. Haldeman as chief of the Division of State Grants, Public Health Service, was announced today by Surgeon General Leonard A. Scheele, Public Health Service, Federal Security Agency. In his new position, Dr. Haldeman will administer the Public Health Service multi-million dollar program of grants-in-aid to states for the development of state, territorial, and local public health services. He will also direct a program of technical and consultive services provided, on request, to state and territorial health authorities.

\* \* \*

### New Reporting Area for Mental Hospital Statistics

Eleven states, containing approximately 58 percent of the national population and approximately 55 percent of all hospitalized mental patients, will form the nucleus of a new reporting area for the compilation of mental hospital statistics, it was announced recently by Surgeon General Leonard A. Scheele of Public Health Service, Federal Security Agency.

### National Institute of Mental Health

Dr. Seymour S. Kety of Philadelphia, Pennsylvania, has been appointed scientific director for the joint research program of the Mental Health Institute and the new Neurological Diseases and Blindness Institute of the National Institutes of Health, according to an announcement by Dr. Leonard A. Scheele, Surgeon General of the Public Health Service, Federal Security Agency.

Dr. Kety comes to the Public Health Service from the University of Pennsylvania, where he has been professor of clinical physiology at the Graduate School of Medicine since 1948. Best known for his research on cerebral circulation, he has also investigated such problems as the mechanisms of anesthesia, psychoses of senility, and the physiologic aspects of current treatments for mental illness.

\* \* \*

### Decrease in Deaths from Tuberculosis

The nation's death rate from tuberculosis dropped about 9 per cent in 1949, to 26.2 per 100,000 population, Dr. W. Palmer Dearing, Acting Surgeon General of the Public Health Service, announced recently. In the first eleven months of 1950, a further decline of 15 per cent occurred, and the rate for this period was 22.6 per 100,000 population, he said, explaining that these figures are provisional, as data for 1949 and 1950 were based on a 10 per cent sample of death certificates obtained from each state and the District of Columbia. Dr. Dearing also pointed out that because the death rate for 1950 was based on figures for eleven months only, no aggregate decrease in the tuberculosis death rate since 1948 can be computed at this time.

The death rate in the United States for all forms of tuberculosis has shown a downward trend for almost half a century, except for a slight rise in 1917 and 1918, during the influenza epidemic of World War I.

\* \* \*

### Instructional Kit for Diabetics

The United States Public Health Service has announced the availability of a kit of audio-visual materials for patient education in diabetes. The kit is intended for use by physicians, nurses, dietitians, and other professional workers engaged in the instruction of diabetic patients.

The kit, which requires the use of a 33 1/3 rpm record player and a 35 mm. film projector, covers all the important things a diabetic should know about taking care of himself. The materials are developed around the story of a typical new diabetic patient. How the patient finds out about his condition, how he learns to take his insulin, how he learns about meal plans are some of the episodes unfolded in the six medical nursing and five nutrition filmstrips.

Complete kits may be purchased from Health Publications Institute, Inc., 216 North Dawson Street Raleigh, North Carolina. Full information about the kit, its price, packaging and use, may be obtained directly from that organization.

### VETERANS ADMINISTRATION

Veterans Administration said recently that it will give special consideration to pre-osteopathic GI Bill students unable to enter accredited osteopathic schools by the July 25, 1951 training cut-off date.

Veterans who complete pre-osteopathic courses under the GI Bill will be permitted to start their osteopathic training whenever an accredited school has room for them—even if it is after the deadline date.



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ciples of Medical Ethics of the American Medical Association,  
Chapter 1, Section 1.

AUGUST, 1951

## SENATE SUBCOMMITTEE BACKS DR. MAGNUSON, CRITICISES GENERAL GRAY

Following the ousting last January of Dr. Paul B. Magnuson as Chief Medical Director of the Veterans Administration by Administrator Carl R. Gray, Jr., a subcommittee of the Senate Committee on Labor and Public Welfare was appointed to investigate the VA medical program, with Senator Humphrey as its chairman. The report of the subcommittee criticised sharply General Gray's management of the program, and commended Dr. Magnuson's work.

Bulletin No. 23 of the Washington Office of the American Medical Association quotes

from the subcommittee's report:

"... the current administrative and statutory organization of the Veterans Administration is such that unless both are changed, its medical-care programs may be subjected again and again to the sort of crisis which recently threatened complete destruction and which is anything but dissipated as yet... We are herewith recommending to the Administrator and to Congress measures which, in our considered opinion, should be immediately adopted if the problems confronting the veterans medical-care program are to be resolved and the possibilities of their recurrence minimized."

The subcommittee offered the following recommendations:

### Proposed Changes in VA Regulations

1. The VA Administrator should formally delegate to the Chief Medical Director such primary authority as may be necessary to assure his effective control over all policy affecting the care and treatment of patients and over the management and operation of the hospital system and this delegation of authority should be clearly and unequivocally set forth.

2. No one shall be appointed manager of a VA hospital without the prior approval of the Chief Medical Director.

3. All "special services" personnel and activities in VA hospitals must be under direct control of hospital managers and operate only in accordance with policies approved by the Department of Medicine and Surgery; furthermore, consideration should be given to abolishing the Office of Assistant Administrator for Special Services, not now under the control of the Medical Director.

4. Budgetary control procedures should be revised, with a view to making the hospital manager responsible for a single budget.

5. Personnel ceiling procedures should be revised, to give the Chief Medical Director more flexibility in the allocation of personnel to hospitals.

The subcommittee says that "... these recommendations should be made effective immediately. ... The threat to the stability of the medical-care program is a clear and present danger which must be met through prompt action."

### Legislative Proposals

1. Public Law 293 (79th Congress) should be amended so as to leave no doubt whatever that the Congress intends the Chief Medical Director to be the principal medical authority of the agency with primary authority to control, manage and operate its medical and hospital program.

2. The law (38 U.S.C. 15) should be amended to provide that the Chief Medical Director be appointed by the President with Senate confirmation.

3. Functions of the special medical advisory group to VA (established by P.L. 293, 79th Congress) should be realigned to provide for (a) changing the name of the group to the Advisory Commission on Veterans' Medical Care, (b) appointment of commission members by the President, (c) representation on the commission of the public, veterans and "eminent authorities in the respective health professions," including members

of the Deans' Committees, (d) continuing review by the commission of VA's medical and hospital program, with a report at least annually to the Administrator and the Chief Medical Director, and (e) regular reports to Congress by the Administrator on the commission's recommendations and his action with respect to them.

It is hard to imagine a more complete vindication of a public servant than the Humphrey subcommittee has given Dr. Magnusson, and hundreds of his friends will rejoice in this belated but righteous verdict. It is to be hoped that the legislative proposals will be speedily adopted.

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### NORTH CAROLINA CONFERENCE ON AGING

The North Carolina Conference on Aging, called by Governor Scott and held at the Sir Walter Hotel in Raleigh, June 28-29, proved that Dr. Wilma Donahue was right in saying that "Old age is becoming as popular a topic as sex." The three general sessions and the six group discussions were well attended, and the interest was sustained throughout. Those who arranged the program deserve great credit for the excellent balance between the various features of the conference.

The pattern of the National Conference on Aging held last year in Washington was followed, except that there were only six sections instead of ten. These were: Section I—Research and Population; Section II—Employment, Employability, and Income Maintenance; Section III—Education, Recreation, and Religion; Section IV—Health Maintenance and Rehabilitation; Section V—Family Life, Housing, and Social Service; Section VI—Professional Personnel.

As in the national conference, these six sections summarized their reports for presentation by their respective secretaries at the final general session. A full account of the conference will be prepared later for distribution to those interested. It was interesting to note how many of the conclusions and recommendations were similar to those of the national conference last year.

Dissatisfaction with rigid compulsory retirement at a fixed age was expressed by all. The need for suitable homes for older people was emphasized. The best ways to awaken the interest of medical men to the importance of geriatrics were stressed, but it was agreed that few doctors would or should limit their work to that field, since the best time to prepare for old age is in maturity.

Mr. Clark Tibbitts, chairman of the Na-

tional Committee on Aging and Geriatrics, spoke to the general session on the first night, and made a most favorable impression. His address is to be published in an early issue of the NORTH CAROLINA MEDICAL JOURNAL. Dr. Wilma Donahue, chairman of the Division of Gerontology, Institute for Human Adjustment, University of Michigan, addressed the last general session, and completely captivated her audience. Governor Scott was to have made the final address, but unfortunately was unable to do so because of an automobile accident which inflicted painful but not serious injuries. His brief address on "North Carolina Looks Ahead for its Aged"—read by Mr. R. G. Deyton—was very timely.

Those who attended the conference were well repaid. A brighter day for our older citizens seems to be dawning.

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### "AN OFFENSIVE FOR OPTOMETRY"

During the 1951 General Assembly a bill was introduced to require the Blind Commission, the Health Department, and the Welfare Department to employ optometrists in the medical care of indigent cases. The bill was passed by the House and by one Senate Committee, but was finally defeated by another Senate committee. In *The Southern Optometrist* for January and February, however, the editor serves notice that this defeat of their bill was by no means final, but that the bill was only a preliminary skirmish to what may come later. As evidence, witness the last paragraph in the first editorial:

"Therefore, we believe that medicine has no more professional or moral right in the field of refraction than optometry has in the field of medicine. We believe that time has arisen for optometry to step out of a defensive position into an offensive position and remain so until the field of non-pathological eye care is relinquished by medicine and assumed in its full scope by optometry. Our public relations department should educate the public that refracting, prescribing and fitting glasses are not any part of medicine and, therefore, occupy no important position in medical education. For his professional self-respect and for the benefit of the public who receives superior service from the optometrist, the medical man should retire from the field of refraction."

It is to be hoped that the Public Relations Department of the State Medical Society can and will do an even better job of educating "the public who receives" medical service that the eyes are an important part of the human body, and that much more is involved in their care than merely fitting glasses.



## Committees and Organizations

### BOARD OF MEDICAL EXAMINERS OF THE STATE OF NORTH CAROLINA

#### *Questions Asked in the 1951 Examination*

##### **Anatomy, Embryology, Histology** Dr. Pany R. Rousseau

(Answer any seven.)

1. a. In what lobe of the lung is a foreign body or an aspiration pneumonia most often found?  
b. On what anatomical basis does this depend?  
c. Give the surface markings of the interlobar fissures.
2. List the normal anatomical structures palpated on rectal examination in the male.
3. a. Explain the development of a congenital cyst of the kidney on an embryological basis.  
b. Describe the histological structure of the ureter.
4. a. Describe the portal circulation.  
b. In case of portal obstruction, what collateral venous circulation might be established?
5. Give the clinically important anatomical relationships of the duodenum.
6. a. Where is red bone marrow found?  
b. Where is yellow bone marrow found?  
c. Describe the development of red blood cells.
7. Describe the extrahepatic biliary tract.
8. a. Give the number, position and relationships of the parathyroid glands.  
b. Describe briefly, their origin and microscopic structure.

##### **Physiology and Chemistry** Dr. Joseph J. Combs Raleigh

##### **Physiology** (Answer any five)

1. (a) Describe the auscultatory method of measuring systolic and diastolic arterial pressure in man.  
(b) Discuss the pulse pressure.
2. Discuss the mechanics of respiration.
3. Name at least four important functions of the blood.
4. What quantity of urine is excreted by a healthy adult in 24 hours? What factors affect the volume excreted?
5. Discuss the mechanism and stimuli of vomiting.
6. Since the oxygen percentage of a given sample of air is the same at sea level and at 25,000 feet altitude, why is it necessary to supply extra oxygen at high altitudes?

##### **Chemistry** (Answer five)

1. (a) What glands secrete saliva?  
(b) What is the principal enzyme of saliva and what does it do?
2. Discuss iron metabolism in the body.
3. Describe the procedure to tell whether a stain on a piece of cloth is blood.
4. Discuss intestinal digestion.
5. (a) What is basal metabolism?  
(b) How is it determined?
6. What is the general composition of feces?

##### **Pathology and Bacteriology** Dr. Clyde R. Hedrick Lenoir

##### **Bacteriology**

1. Give the classification of bacteria and name an example of each division.
2. Describe in detail a bacteriologic procedure by which you could determine the fecal contamination of a water supply.

3. What are the essential factors in infective processes?
4. What are Rickettsia bodies and what are the diseases caused by rickettsiae?
5. Describe the causative organism of syphilis.

##### **Pathology**

1. Give a general explanation of the pathology of edema and include its chief factors.
2. Give the etiology and pathologic nature of acute endocarditis. If the patient recovers, what permanent pathologic condition results?
3. What pathologic conditions are productive of icterus?
4. What pathologic changes may result from cerebral hemorrhage?
5. Give pathology of acute anterior poliomyelitis.

##### **Pediatrics, Pharmacology, and Public Health and Preventive Medicine** Dr. Amos N. Johnson Garland

##### **Pediatrics**

(Answer any four)

1. Discuss signs, symptoms, and differential diagnosis of anterior poliomyelitis in pre-paralytic stage.
2. Discuss etiology, differential diagnosis, and treatment of enuresis in a 6 year old child.
3. (a) Outline an immunization program for an infant in the first year of life.  
(b) Discuss briefly the diagnosis and treatment of whooping cough in a child of 4 years of age.
4. Discuss the etiology and treatment of acute diarrhea in a child of 1 year of age.
5. Name the major complications of:  
(a) Measles  
(b) Mumps  
(c) Impetigo  
(d) Scarlet fever

##### **Pharmacology** (Answer any four)

1. Given a patient with cardiac decompensation with dependent edema, discuss mechanism of action of (a) digitalis; (b) mercurial diuretics; (c) sodium ion restriction in removal of excess fluids from the body.
2. (a) Outline briefly the method for the biological assay of insulin.  
(b) Discuss the relative merits of the following Insulins:  
(1) crystalline; (2) globin; (3) NPH; (4) PZI, and outline feeding plan for each as to the number and timing of feedings.
3. Discuss propylthiouracil and iodine as used in the treatment of thyrotoxicosis including a brief discussion of the toxic manifestations of each.
4. (a) Give symptoms, diagnosis, and treatment of acute morphine poisoning.  
(b) Write a prescription for adequate relief of severe pain of organic etiology in an adult using one drug controlled by Harrison Narcotic Act.
5. Write brief comparative notes on the following:  
(a) ACTH and Cortisone  
(b) Penicillin and Aureomycin.

##### **Public Health and Preventive Medicine** (Answer any four)

1. Outline and discuss briefly a diabetic control program for any given community.
2. (a) List the gastrointestinal parasites common to this area giving anthelmintic of choice in each instance.  
(b) Give complete life cycle of one parasite listed above.

3. (a) Discuss briefly milk as a transmitter of disease.  
(b) Outline basic requirements for a satisfactory community milk supply.
4. Outline briefly course to be followed by person exposed to (a) dogbite; (b) pulmonary tuberculosis; (c) whooping cough; (d) primary syphilis; (e) meningococcal meningitis; (f) diphtheria.
5. Discuss the control and prevention of venereal disease from a public health standpoint.

**Medicine and Therapeutics**  
Dr. L. Randolph Doffermeyer  
Dunn

(Answer any seven)

1. Describe the diagnosis and the treatment of a patient who has exudative, productive tuberculosis, of the right upper lobe, with a spread of the disease to the left lung.
2. Discuss the symptoms, the physical signs, and laboratory observation in a patient with infectious mononucleosis.
3. Discuss the treatment of Laennec's cirrhosis of the liver and two common complications.
4. Differentiate between hyperthyroidism and an anxiety state with cardiac manifestation.
5. Outline the clinical and laboratory data that enables one to make the diagnosis of Hodgkins disease and discuss treatment.
6. Discuss the diagnosis, the signs and the treatment of a child 14 years old, who has acute rheumatic fever.
7. Name five extra abdominal diseases, which may simulate an acute surgical abdomen and briefly discuss treatment of two.
8. Give the symptoms and signs of congestive heart failure. What are the general means of treatment?

**Gynecology and Obstetrics**  
Dr. Heyward C. Thompson  
Shelby

#### Gynecology

1. List the causes of vaginal discharge and discuss the principles of therapy.
2. Describe the menstrual cycle and discuss the physiology of its production.
3. Discuss the present surgical and radiological therapy of carcinoma of the cervix.
4. What are the more common causes of post menopausal bleeding? Outline diagnosis and treatment.

#### Obstetrics

1. (a) What is the significance of an elevated anti-RH antibody titre?  
(b) How would you manage the pregnancy of a patient who has delivered an erythroblastotic infant previously?
2. (a) Name three possible causes of painless bleeding in the third trimester of pregnancy.  
(b) Outline diagnosis and treatment of these complications.
3. (a) Name causes of post partal hemorrhage.  
(b) Outline treatment.
4. How would you manage a primigravida in the 36th week of pregnancy who developed sudden hypertension and albuminuria?
5. Discuss the increased hazards encountered by the pregnant diabetic woman and present concepts of management.
6. Outline briefly prenatal care throughout pregnancy.

**Surgery**  
Dr. Newsom P. Battle  
Rocky Mount

(Answer any ten)

1. Differentiate between thrombophlebitis and

phlebothrombosis.

- (a) Suggest treatment
- (b) Prophylaxis
2. Name the causes of testicular enlargement.
3. Outline the treatment to be given at the scene of the accident for:  
(a) Fracture of the femur  
(b) Suspected back injury
4. Name the surgical conditions of the spleen.
5. What is the rationale of vagotomy in the treatment of peptic ulcer.
6. Give the symptoms of severance of (1) Ulna; (2) Radial; (3) Median nerves, at the wrist.
7. Excluding incompatibilities, what is the cause of death following blood transfusions?
8. In what intra-abdominal condition might strangulation of small intestine occur without symptoms of peritoneal irritation?
9. List two of the most important signs or symptoms or laboratory studies in the diagnosis of each of the following conditions (Not more than two for each of the seven lesions).  
(a) acute appendicitis  
(b) acute pancreatitis  
(c) perforated duodenal ulcer  
(d) pyloric stenosis in infants  
(e) carcinoma of head of pancreas  
(f) intraductal papilloma of breast  
(g) intussusception in infants
10. What examinations should be made in a suspected case of carcinoma of the lower bowel before x-ray examination.
11. Differentiate between:  
(a) Subdural Haematoma  
(b) Extradural Haematoma

## BULLETIN BOARD

### NORTH CAROLINA CONFERENCE ON AGING

The first North Carolina Conference on Aging, a citizens conference called by Governor W. Kerr Scott, was held in Raleigh June 28-29. Highlighting the Conference were group discussions on "Research and Population," led by Dr. Rupert Vance, Department of Sociology, University of North Carolina; "Employment, Employability and Income Maintenance" by Dr. Ellen Winston, Commissioner of Public Welfare; "Education, Recreation and Religion" by Russell M. Grumman, director Extension Service, University of North Carolina; "Health Maintenance and Rehabilitation" by Dr. Wingate M. Johnson, Bowman Gray School of Medicine of Wake Forest College; "Family Life, Housing and Social Service," by Annie May Pemberton, State Board of Public Welfare; and "Professional Personnel" by Dr. Frank T. de Vyver of Durham.

Resolutions passed by the group at the final session included the following:

"WHEREAS Governor Scott, recognizing the importance of considering the effect—economically and socially—of the growing number of older persons in the State's population, issued a call for this first State-wide Conference on Aging, and

"WHEREAS the discussion of these past two days and the reports presented this morning indicate that many steps should be and can be taken with respect to the needs of older persons in our State,

"Be it resolved

"That we express our appreciation to Governor Scott for calling this Conference and request that at his earliest convenience the Governor appoint a special committee on aging to follow up on the work of this Conference."



## NORTH CAROLINA TUBERCULOSIS ASSOCIATION Southern Tuberculosis Conference

The program for the annual meeting of the Southern Tuberculosis Conference to be held in Chattanooga, Tennessee, September 20-22, has almost been completed according to Frank W. Webster, secretary-treasurer of the Conference and executive secretary of the North Carolina Tuberculosis Association. The Conference is composed of fifteen Southern states and the District of Columbia.

Subjects to be discussed in the Medical Section and some of the principal speakers include: "Present Day Status of Chemotherapy" by Dr. Gladys Hobby of Brooklyn, New York, and Dr. Henry Sweany of Jacksonville, Florida; "Effects of ACTH and Cortisone on Experimental Tuberculosis," by Dr. Martin M. Cummings of the VA Hospital, Chamblee, Georgia; "Segmental Resection in Pulmonary Tuberculosis" by Dr. James D. Murphy, Oteen; "Pitfalls of Surgical Treatment of Bronchiectasis" by Dr. Charles P. Cake of Arlington, Virginia; "Psychosomatic Approach to Tuberculosis" by Dr. Maurice Greenhill, Duke University School of Medicine, Durham; Sanatorium Care and the Aged," by Dr. W. M. Peck, and Dr. W. C. Hewitt, of McCain; "Resection in Pulmonary Neoplasms," by Dr. Osler A. Abbott of Emory University, Georgia; "TB Control in a State Health Department Program," by Dr. R. S. Gass of Nashville, Tennessee; "The Surgical Treatment of Pulmonary Tuberculosis" by Dr. L. H. Strug of New Orleans, Louisiana; "Decordication in Tuberculosis and Non-Tuberculous Diseases" by Dr. David Waterman of Knoxville, Tennessee.

In the Public Health Section subjects to be discussed include: Symposium—"Tuberculosis Associations at Work," Symposium—"Civil Defense;" Symposium—"Changing Trends in Community Health Education, School Health, Industrial Health Education, Public Relations and Seal Sale."

Speaking at the three General Sessions will be Dr. Edward G. McGavran of the University of North Carolina on "Team Concept in Public Health"; Drs. C. D. Bowdoin, Wilson G. Smillie and Joseph W. Mountin on "Multiple Screening—An Evaluation"; and for the final General Session Dr. Stuart Willis of McCain will summarize the program from the Medical Section, and Miss Fannie Shaw of Valdosta, Georgia, will summarize from the Public Health Section.

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### Drop in TB Deaths, Increase in New Cases For 1950

North Carolina had a decided drop in the number of deaths and in the death rate from tuberculosis in 1950, according to the figures now being compiled for release by the Vital Statistics Bureau of the State Board of Health. The number of reported deaths from tuberculosis in 1950 was 750 as against 956 reported for 1949. The death rate for the state in 1950 was 18.5 per 100,000 population while in 1949 it was 23.6.

However, in 1950 there were 257 more new cases reported than in 1949 (3,507 in 1950; 3,250 in 1949).

## NORTH CAROLINA STATE BOARD OF MEDICAL EXAMINERS

The State Board of Medical Examiners will meet at the Grove Park Inn, Asheville, October 7 and 8, 1951. Applicants for licensure by endorsement of credentials will be interviewed on October 8 at 9 a. m.

## NEWS NOTES FROM THE UNIVERSITY OF NORTH CAROLINA SCHOOL OF MEDICINE

Dr. Charles Hoyt Burnett, professor and chairman of the Department of Internal Medicine, Southwestern Medical School of the University of Texas, has accepted appointment as professor and head of the Department of Medicine, and plans to come to Chapel Hill in September. Dr. Burnett is a native of Boulder, Colorado, and took his undergraduate and medical training at the University of Colorado. Before going to the University of Texas, he was associated with the Presbyterian Hospital in New York, the Massachusetts General Hospital, and was successively instructor through associate professor in the Department of Medicine at the Boston University School of Medicine. Dr. Burnett is a member of the Society for Clinical Investigation, the Association for the Study of Internal Secretions, the New York Academy of Science, the Southern Society for Clinical Research, and the American Federation for Clinical Research.

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Dr. Clarence M. Miller, Jr., and Dr. James B. Caulfield have been appointed Fellows in Pathology. Dr. Miller, an alumnus of this school, received his M.D. degree at Jefferson Medical College and had training in pathology at the Sacred Heart Hospital in Allentown, Pennsylvania; he replaces Dr. J. H. Smith Foushee, who has reported for active duty in the Air Corps. Dr. Caulfield, a graduate of the University of Illinois School of Medicine, replaces Dr. Robert D. Langdell, who has been promoted to instructor in pathology.

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Dr. John H. Ferguson, professor of physiology, was recently appointed research consultant with the Atomic Energy Commission at the Oak Ridge Institute of Nuclear Studies.

## NEWS NOTES FROM THE DUKE UNIVERSITY SCHOOL OF MEDICINE

Two Duke University physicians wound up two years' service with the United States Atomic Bomb Casualty Commission in Hiroshima, Japan, this month and have returned to Duke Hospital.

Drs. Paul G. Fillmore and Robert F. Poole will work at Duke on fellowships sponsored by the Atomic Energy Commission. Dr. Grant Taylor, director of the ABCC and assistant dean of the Duke Medical School now on leave, announced.

Five other Duke physicians, and Dr. Taylor, will remain in Japan on the ABCC staff. They are Dr. Warner L. Wells, Dr. Bernard Black-Shaffer, Dr. Alice E. Black-Shaffer, Dr. John N. Wood, and Dr. Robert M. Sinsky.

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A memorial plaque in honor of the four alumni of the Duke University Medical School who died in service during World War II has just been placed in the main lobby of Duke Hospital.

Several hundred Duke medical school alumni contributed to purchase the bronze tablet. Alumni whose names are inscribed are Walter E. Brown, '39; William W. Green, III, '44; John F. Kincaid, Jr., '42; and Robert E. Seibels, Jr., '44.

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Four Duke University scientists were invited to take part in the Gordon Research Conferences on Cancer in New London, N. H., August 27-31. Attending were Dr. Joseph W. Beard, professor of surgery in charge of experimental surgery; and Mrs. Dorothy Beard, Dr. Edward A. Eckert, and Mrs. Elizabeth Mommaerts, all research associates at Duke.

Dr. Beard and his colleagues are all members of Duke's virus research laboratory. Dr. Beard spoke to the conference on fowl tumors.

### SIXTH DISTRICT MEDICAL SOCIETY

The Sixth District Medical Society will convene at State Hospital, Butner, on Wednesday, October 10. The following program has been arranged

#### Afternoon Program

- 2:30—Registration  
 3:00—Bayard Carter, M.D., Durham—The Modern Concept of the Treatment of Threatened Abortion  
 3:15—Alfred T. Hamilton, M.D., Raleigh—Surgery of the Spleen  
 3:30—Joseph M. Hitch, M.D., Raleigh—The Non-Surgical Management of Facial Skin Malignancy  
 3:45—Walter S. Hunt, M.D., Raleigh—The Surgical Treatment of the Ruptured Lumbar Intervertebral Disk  
 4:00—Intermission  
 4:15—Charles F. Williams, M.D., Raleigh—Vomiting in Infancy  
 4:30—James W. Woods, M.D., Durham—Newer Concepts of the Role of Potassium in Disease  
 4:45—Thomas C. Worth, M.D., Raleigh—Common Lesions of the Esophagus  
 5:00—Hubert B. Haywood, Jr., M.D., Raleigh—The Importance of Early Detection of Glaucoma  
 5:15—Tom B. Daniel, M.D., Raleigh—Upper Urinary Tract Obstruction  
 5:30 to 6:30—Dinner

#### Evening Program

- 6:30—Election of Officers. Introduction of Special Guests by M. D. Hill, M.D.  
 7:00—Nathan A. Womack, M.D., Professor of Surgery, The University of North Carolina, Chapel Hill—The Significance of Benign Lesions of the Breast

Officers of the Society are W. Howard Wilson, M.D., president; Sam Carrington, M.D., vice president; Arthur H. London, Jr., M.D., councilor; Francis N. Bowles, M.D., vice councilor; and Grayson S. Waldrop, M.D., secretary-treasurer.

### CARTERET COUNTY MEDICAL SOCIETY MEETING

The regular monthly meeting of the Carteret County Medical Society was held July 9, at the Morehead City Hospital, Morehead City. This was a dinner meeting, the hospital acting as host.

The only scientific paper presented was given by Dr. A. D. Brasher, professor of anatomy, Medical College of Virginia, Richmond. His subject was "The Anatomical Relationship of Pain."

Doctor M. B. Morey, Morehead City, secretary of the society, made a progress report on the coming postgraduate course to be presented by the Extension Department of the University of North Carolina, in New Bern, in the fall. This course will be under the sponsorship of the Craven County and the Carteret County Medical Societies.

Dr. N. Thomas Ennett, Carteret County Health Officer, informed the society of the probability of the Health Department abandoning all vaccinations should the county have an outbreak of polio. He stated, however, that no cases of polio had been reported in Carteret County this year.

N. THOMAS ENNETT, M.D.  
 Corresponding Secretary

### NORTH CAROLINA ALCOHOLIC REHABILITATION PROGRAM

The progressive stages through which a personality stumbles on the road to alcoholism is currently being dramatized for the North Carolina Alcoholic Rehabilitation Program, according to an announcement by S. K. Proctor, ARP executive director.

The ARP recently contracted with the University of North Carolina Communication Center to set up these dramas in thirteen fifteen-minute recorded radio programs to acquaint the general public with some of the symptoms and causes of alcoholic addiction.

The purpose of this series of radio dramas, according to Proctor, is to help our citizens recognize the illness of alcoholism and do something about channeling the various victims to the proper treatment facilities.

Another aim is to show some of the errors and misconceptions often held by members of the sufferer's family in their sincere attempts to help him.

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Administrators of North Carolina's general hospitals have been invited to observe the methods of setting up alcoholic facilities for temporary treatment of acute alcoholism. S. K. Proctor, executive director of the North Carolina Alcoholic Rehabilitation Program, has announced.

Traveling expenses and daily maintenance up to \$10.00 daily are available to those administrators and their medical staff or governing board members who desire to study the alcoholic facilities of four eastern hospitals that have pioneered in accepting problem drinkers—Episcopal and St. Luke's in Philadelphia, and Knickerbocker and Townes in New York City.

According to Director Proctor, "The primary aim of this offer, which was authorized by the North Carolina Hospitals Board of Control, is to encourage and promote similar facilities for North Carolina."

### NEWS NOTES

Dr. Vernard F. Bond, Jr., has announced the opening of his offices at 710 Nissen Building, Winston-Salem, North Carolina. His practice will be limited to internal medicine.

### MISSISSIPPI VALLEY MEDICAL SOCIETY

The sixteenth annual meeting of the Mississippi Valley Medical Society will be held at the Pere Marquette Hotel, Peoria, Illinois, September 19, 20, and 21, under the presidency of Dr. Ralph McReynolds of Quincy, Illinois. Over thirty clinical teachers from the leading medical schools will conduct this great postgraduate assembly, whose entire program is planned to appeal to general practitioners. There will be over fifty scientific and technical exhibits, noon round-table luncheons, and so on. No registration fee will be charged, and every ethical physician is cordially invited to attend. The entire program and all exhibits will be held in the Pere Marquette Hotel. A program of the meeting may be obtained from Harold Swenberg, M.D., Secretary, 209-224 W. C. U. Building, Quincy, Illinois.

### AMERICAN MEDICAL WRITERS' ASSOCIATION

The eighth annual meeting, American Medical Writers' Association, will be held at the Pere Marquette Hotel, Peoria, Illinois, Wednesday, September 19, during the sixteenth annual meeting of the Mississippi Valley Medical Society (September 19,



20, 21) at the same hotel. The program will consist of presentations by Dr. Ralph H. Major, professor of medicine and of the history of medicine, University of Kansas; Dr. Austin Smith, editor of the *Journal of the American Medical Association*; and Miss Marguerite Stadelhofer, managing editor, the C. V. Mosby Company, medical publishers. A new constitution, which somewhat liberalizes membership requirements, but does not alter the present educational requirements, will be voted on. There will be no registration fee, and all ethical physicians and other college graduates who are interested in medical writing or journalism are cordially invited to attend. A program of the meeting may be secured from the Secretary, Harold Swanberg, M.D., 209-224 W.C.U. Building, Quincy, Illinois.

### FISKE FUND PRIZE DISSERTATION

The Trustees of the Caleb Fiske Fund of the Rhode Island Medical Society announce the following subject for the prize dissertation of 1951:

#### **The Present Status of Adreno-Cortical Hormone Therapy—Its Uses and Limitations**

For the best dissertation a prize of \$200 is offered. Dissertations must be submitted by December 2, 1951, with a motto thereon, and with it a sealed envelope bearing the same motto inscribed on the outside, with the name and address of the author within. The successful author will also agree to read his paper before the Rhode Island Medical Society at its Annual Meeting in May, 1952. Copy must be typewritten, double spaced and should not exceed 10,000 words. For further information write the Rhode Island Medical Society, 106 Francis Street, Providence 3, Rhode Island.

### NATIONAL FOUNDATION FOR INFANTILE PARALYSIS

#### **Statement of N.F.I.P. on Relationship of Immunization Procedures and Paralytic Poliomyelitis**

"The possible relationship between paralytic poliomyelitis and injections for immunizing against whooping cough, diphtheria, tetanus, or injection of other biologic and medicinal substances recently has been the subject of intensive study by English, Australian, and American workers. The English and Australian workers have concerned themselves mainly with the effect of injection of substances for immunizing against diphtheria, whooping cough, and tetanus. The American investigators, in addition, have studied the possible effects of injections of such other substances as penicillin and Novocaine.

"Cases of paralytic poliomyelitis were studied in respect to injections of the substances mentioned above prior to onset of the disease. When such an injection had been received within the month immediately preceding, the limbs in which the injections had been made were paralyzed more frequently than were the corresponding limbs of cases with no history of recent injections. No such relationship has been found in cases where such injections had been given more than a month before the onset of poliomyelitis.

"The studies do not show that injections for the prevention of whooping cough, diphtheria, tetanus, or injections of other medicinal substances, are the cause of poliomyelitis. The great majority of cases of poliomyelitis give no history of recent injections. There is no evidence that poliomyelitis infection is any more frequent among persons who receive such injections than among those who do not.

"Studies on the relationship of paralytic poliomyelitis to injections of medicinal substances have

not been completed nor have the results been properly evaluated as yet. Results reported to date are tentative and should not be considered at this time as final evidence. They should be considered only in the light of a warning against indiscriminate injections during periods of poliomyelitis epidemics.

"Other studies supported by March of Dimes funds are expected to further clarify this question. The results will be released as they become available."

### NATIONAL SOCIETY FOR CRIPPLED CHILDREN AND ADULTS

How parents of cerebral palsied children can effectively come together to exchange experiences, secure information and participate in developing services for cerebral palsied children is outlined in the new 76 page *Parents' Study Guide*, published by the National Society for Crippled Children and Adults, Chicago.

The booklet was prepared by the national Easter Seal Agency in answer to many requests for help in forming a parents' group, planning a program for parent study, and assisting in building programs for children. In an effort to answer these requests, the professional and technical staff of the National Society for Crippled Children and Adults, with the valuable assistance of other persons and organizations, prepared the *Parents' Study Guide*, under the direction of Verna S. Carlisle, the Society's Child Development and Parent Education Consultant.

For one to twenty-five copies, the cost is 50 cents each; twenty-six to 100 copies, 45 cents each; and more than 100 copies, 40 cents each. Copies are available from the National Society for Crippled Children and Adults, 11 South LaSalle Street, Chicago 3, Illinois.

### AMERICAN ACADEMY OF GENERAL PRACTICE

Dr. Hugh H. Hussey, associate professor of medicine at Georgetown University, Washington, D. C., has been appointed associate editor of *GP*, published by the American Academy of General Practice, according to an announcement by Mac F. Cahal, managing publisher, in the August issue of that journal. The announcement pointed out that the rapid growth of the publication during the past year and one-half has thrown a steadily increasing burden on the medical editor, Dr. Walter C. Alvarez.

Dr. Hussey, selected from a wide list of potential candidates, brings to his new post an imposing record of experience in clinical medicine, teaching, writing, and editing. He received his M.D. from Georgetown University School of Medicine in 1934, and served his internship and residency at the University Hospital in Washington. In addition to his position as associate professor of medicine on the Georgetown faculty, he has, for some years, served as associate editor of *The Medical Annals of the District of Columbia*.

Dr. Hussey is author of the section on "Supportive and Symptomatic Therapy" in the medical textbook, *Fundamentals of Internal Medicine*, now in its third edition. He has also had many clinical papers published in the medical literature.

Dr. Hussey carries on a consultation practice in Washington, and is a member of the staff of Gallinger Hospital and the University Hospital and is senior consultant on vascular diseases at the Mount Alto Veterans Hospital.

### AMERICAN HEART ASSOCIATION

Dr. Louis N. Katz, president of the American Heart Association, announced recently that new research applications in the cardiovascular and related fields are being accepted for studies to be conducted during the academic year beginning in July, 1952. Applications for Research Fellowships and Established Investigatorships, two categories in which awards are made to individuals, may be submitted up to September 15 of this year. Applications for research grants-in-aid to institutions, including grants for work in the basic sciences, may be filed up to December 1. Dr. Katz said information and forms may be obtained from the Medical Director, American Heart Association, 1775 Broadway, New York 19, N. Y.

Fellowships for Established Investigators may be granted for a five year period at a minimum stipend of \$5,000, with an annual increase of \$500. Research Fellowships are granted for a one year period, with a stipend ranging from \$3,000 to \$4,300. Grants-in-aid to institutions vary in amount and are designated for a specified program of research.

Dr. Katz said the Association will shortly announce approved grants-in-aid to institutions for the 1951-52 academic year.

### AMERICAN COLLEGE OF SURGEONS

#### Color Television Planned for San Francisco Congress

Letterman Army Hospital has been selected as the source of the telecasts of surgical procedures for the color television program which will be a feature of the thirty-seventh annual Clinical Congress of the American College of Surgeons to be held in San Francisco, November 5 to 9. The color telecasts will be shown at the Civic Auditorium, in which many of the other major sessions of the Congress, registration, medical motion picture showings, and the scientific and technical exhibits, will be held.

Surgeons of San Francisco and of East Bay communities are developing an extensive and varied program of operative clinics and demonstrations in twenty-six hospitals to be held during the week of the Clinical Congress. Leading surgeons and surgical groups from Texas to British Columbia are participating in the filming of surgical procedures for the cine clinics, a relatively new facility for portraying developments in surgery. Smith, Kline & French Laboratories of Philadelphia are again making the telecasts possible by providing their equipment, which employs the CBS system of color television. The cine clinics are made possible through the co-operation of Davis & Geck, Inc.

Ten sessions of the Forum on Fundamental Surgical Problems are planned, at which brief reports will be presented of original clinical and experimental observations relating to the broad aspects of general surgery and the surgical specialties. Among the other sessions will be symposia on cancer and on trauma; panel discussions for surgeons and surgical specialists; and official meetings.

The thirtieth annual Hospital Standardization Conference will be held as a part of the Clinical Congress, with eleven sessions devoted to subjects of interest to surgeons, other physicians, hospital trustees, administrators, nurses, technicians, dietitians, and personnel of other hospital departments.

\* \* \*

#### Military Surgeons to Convene in Chicago October 8-10

The fifty-eighth Annual Convention of the Association of Military Surgeons of the United States

will be held at the Palmer House in Chicago, October 8 to 10. Members of allied medical services such as nursing, dentistry, veterinary medicine, women's medical specialty corps, and medical service corps, as well as physicians, will participate in the sessions. Advances in military medicine since World War II, and current problems arising out of the critical world situation and the Korean conflict, will be discussed.

### DEPARTMENT OF THE AIR FORCE

#### Civilian Medical and Dental Care For Active Duty Air Force Personnel

The United States Air Force is responsible for the provision of medical and dental care to United States Air Force military personnel on active duty, and to their dependents in so far as facilities are available. Whenever it is feasible and practicable for Air Force personnel to receive medical care at Air Force medical installations they should do so. Conversely, Air Force medical installations provide medical and dental care to all Air Force personnel who may be assigned in the area, whether or not these personnel may be assigned to the particular Air Force base.

Naturally it is not possible to have USAF medical installations readily accessible to our personnel in every geographical location. In those locations where we do not have such facilities, it is necessary to depend on other governmental or civilian agencies for these services. Those agencies include medical and dental services of the Armed Forces (Army and Navy), and other federal agencies, such as the Veterans Administration and the United States Public Health Service. When medical and dental services of government agencies are not available, care may be obtained from civilian sources at no expense to the individual, provided such care is a necessity and an emergency. Only active duty Air Force personnel on duty, leave or informal leave (pass status) or those people stationed where no other military or federal medical installation is available may utilize civilian medical care at Air Force expense. USAF military personnel absent without official leave (AWOL) are not authorized civilian medical care, but can receive treatment at any military installation. Dependents of active duty Air Force personnel are not authorized civilian medical care at Air Force expense.

All bills for services, including ambulance charges, rendered USAF military personnel by civilian physicians or medical facilities will include:

1. Full name, rank, service number and organization to which assigned for duty.
2. Duty status of patient, if known, i.e., duty, leave or informal leave (pass).
3. Inclusive dates of treatment if hospitalized, otherwise, date and place of treatment.
4. Diagnosis.
5. Charges (itemized separately for services, drugs, x-rays, etc.).
6. A statement certifying that the bill is correct and just; that payment has not been received; that the services rendered and the medicine furnished were necessary, and that charges do not exceed those customary in the vicinity.

Payment for medical and dental service properly submitted from civilian sources to USAF military installations will be accomplished promptly after receipt of necessary authenticated vouchers. The civilian physician is advised to send the bill for services rendered directly to the Commanding Officer of the nearest Air Force Base.



## DEPARTMENT OF THE ARMY

### Ground Broken for New Institute of Pathology

Ground-breaking ceremonies for the new Armed Forces Institute of Pathology took place at 3 P.M., July 10, at the Army Medical Center, Washington, D. C., Major General George E. Armstrong, Surgeon General of the Army, has announced.

The \$7,250,000 structure will take approximately two years to build, and upon completion will fulfill a long felt need in the field of pathology.

Now located at 7th and Independence Avenue, Washington, D. C., the Institute occupies a structure built in 1887. Constantly increasing demands for the services offered by the Institute have made it imperative that adequate, modern housing be obtained if those services were to be maintained at the necessary high standards.

(BULLETIN BOARD CONTINUED ON PAGE 412)

## Classified Advertisements

### WANTED

Position as junior associate or assistant with certified urologist who can give preceptee training. Need one year for Board requirements. Possibility of permanent association desirable. Address replies to Box 790.

### FOR IMMEDIATE SALE

One complete set of office equipment for the General Practitioner, including modern, practically new equipment for a consultation room, two examining rooms, EENT examining chair and equipment, Darkroom and fine x-ray equipment (Picker Century unit with 60 ma, double focal spot tube and all accessories). This equipment may be purchased in toto at a real bargain; will also consider offers for individual parts. Contact Dr. D. L. Phillips, Spruce Pine, N. C.

### YOUNG ASSOCIATE WANTED

In long standing EENT practice. \$7,500 net first year, full partnership second year. In town of 28,000 population. Practice enough for two and opportunity to increase. Reply WLS, Box 1606, Raleigh, North Carolina.

### Armour Breaks Ground for New Pharmaceutical Center

Ground was broken for the new Armour Pharmaceutical Center in Kankakee County, Illinois, June 21, and it was revealed that the Company hopes to begin operations there within 18 months. The plant is being built on a mile long 175 acre tract just north of Bradley, Illinois. The initial construction will consist of eleven buildings of modern design.

## AUXILIARY

### MESSAGE FROM THE PRESIDENT

In this, my first message to the Auxiliary to the Medical Society of the State of North Carolina, I want to thank you for the honor you have paid me in entrusting the leadership of this organization to me for the coming year. I am especially grateful to Mrs. Harry L. Johnson, our retiring president, for her helpful suggestions and the many thoughtful things she did to help me prepare myself for the task I am undertaking.

It was my privilege to attend the meeting of the National Auxiliary in Atlantic City, June 12-15, and to make the report for North Carolina. I was proud to make this report and to feel that North Carolina was keeping abreast of the other states. It was inspiring to hear the reports from all forty-eight states and Hawaii and Alaska—all these women working arduously for the same goals that we here in North Carolina are striving to achieve. I was impressed with the evident ability and friendliness of the national officers. They, as we, are interested doctors' wives, working to further the aims of the greatest profession in the world.

We must remember that on all three levels—national, state, and district—the Auxiliary is one organization with one main program to follow. This program is given to us by the American Medical Association. If we are to be an Auxiliary we must strive to carry our share of this program. We have no reason for being if we do not do this. Our main fields are: public relations, nurse recruitment, legislation, and promoting the sale of *Today's Health*. Everything else we do on the local level is subordinate to these large aims set down for us by the American Medical Association.

This year we must try harder to enroll every doctor's wife in the state as a member of the Auxiliary. Everyone is needed. We must cooperate wholeheartedly with the Medical Society of North Carolina whenever it gives us a job to do. We must aid every health drive in our community, thereby creating the right public relations for our busy husbands. We must let the public know that we are interested in its welfare. We must take the lead in Civil Defense. We must promote Voluntary Health Insurance wherever possible, and see that *Today's Health* is in all

school and public libraries in our localities. There is a job for us to do.

My wish for you has been for a pleasant and restful summer, with a determination in the fall of making this our best Auxiliary year to date.

MRS. B. WATSON ROBERTS

\* \* \*

#### SOME OBSERVATIONS AT ATLANTIC CITY

The June, 1951, session of the American Medical Association in Atlantic City was most successful. It was the largest in years. Twenty-eight thousand doctors, their families, and visitors were registered.

The numerous exhibits were well arranged and most instructive. They were well attended each day.

The professional program was illustrated by moving pictures and colored television. One could sit and see the various operations that were being performed in the local hospital.

As you know, doctors have hobbies as well as other people, and they do exceptionally well in art. Their exhibit was lovely, with numerous paintings covering many subjects.

The A.M.A. is most fortunate in having as its leader Dr. John Kline of San Francisco, California. He is well qualified for this position by past experience in organized medicine. He is past president of the California Medical Association, and has served on various committees of the A.M.A. for a number of years. He has a charming personality and is a most pleasing speaker. His speeches contain food for thought, and he has the happy faculty of making people enjoy listening to him.

It was a real inspiration to attend the American Medical Association. It was stimulating to hear the brilliant men of medicine and their equally intelligent consorts, who are leaders of the Auxiliary to the A.M.A. It is most gratifying to know that the women of the Auxiliary to the A.M.A. are doing such a good job. A.M.A. leaders have commended the Auxiliary for their work and support, and have assigned a very definite job for doctors' wives to do.

Public relations is one activity we are asked to participate in. Mrs. Theodore E. Heinz, national chairman of Public Relations, led a most informative panel on the

subject. It is amazing to hear about the tremendous amount of work that is being done throughout the country. Nebraska did a wonderful piece of work in sponsoring an essay contest on "Medicine's Role in Preserving America's Way of Life." The winner's essay was so good that she was asked to read the essay to many civic groups and schools, and over the radio, thereby reaching thousands of people. There were other reports of successful essay contests and nurse recruitment programs with scholarships offered in most states. Interesting all-day meetings with lunch, films, talks—all well attended and successful—were reported from other places. Proper public relations is most important to the future of America and the public.

To quote Dr. Elmer L. Henderson, immediate past president.

"I just want to give you a few words of warning. Our battle is not won, and I hope that no state will feel that the battle is won and that we should give up our educational committees in the various states or that we should give up in any way!

"Until after the election in 1952, we cannot afford to take any chances. We have got to be on guard every minute. The forces that are working today and that were working two and a half years ago for Compulsory Health Insurance and for Socialized Medicine, I may say, are just as active today as they were then. I was warned in Washington last week by those men who know that they are even more active than they were a few years ago. I just wanted to give you that note of warning."

The A.M.A. is raising an educational fund to help support medical colleges rather than have them supported by the government. To this fund the Auxiliary donated \$10,000. Dr. Louis H. Bauer, the newly elected president-elect, said:

"We must be leaders in the development of community health councils. We must further expand our grievance committees which have been growing rapidly. Panels of physicians must be available everywhere to cover night, holiday, and emergency calls. Nothing irritates a citizen more than being unable to obtain a doctor when he needs one. We must assist in the training of auxiliary and technical personnel of which there is a great shortage."

To attend these meetings gives one great pride in American medicine and the men and women who are its leaders.

ANNA L. STROSNIDER (Mrs. C. F.)

Delegate to the National Auxiliary  
to the American Medical Association



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TRANSACTIONS  
OF THE  
MEDICAL SOCIETY  
OF THE STATE OF NORTH CAROLINA

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NINETY-SEVENTH ANNUAL SESSION

. . . held at . . .

PINEHURST, NORTH CAROLINA

MAY 7, 8, and 9, 1951

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President, Roscoe D. McMillan, M.D., Red Springs

Secretary-Treasurer, Millard D. Hill, M.D., Raleigh

Executive Secretary, James T. Barnes, Raleigh

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## EARLY HISTORY OF THE MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA FROM ORGANIZATION TO 1804

Date	Place	President	Vice Presidents	Corresponding Secretary	Secretary	Recording Secretary	Treasurer	Censors
Dec. 17, 1799, or April 16, 1800	Raleigh	Richard Fenner	Nathaniel Loomis John Claiborne	Calvin Jones		Wm. B. Hill	Cargill Massenburg	Sterling Wheaton James Webb Jas. John Pasteur Jason Hand
Dec. 1, 1800	Raleigh	Richard Fenner			Sterling Wheaton			
Dec. 1, 1801	Raleigh	John C. Osborne	Thomas Mitchell Richard Fenner	Calvin Jones	Sterling Wheaton		Cargill Massenburg	James Webb John Sibley
1802	Raleigh	John C. Osborne		Calvin Jones				
1803	Raleigh	John C. Osborne		Calvin Jones				
1804	Raleigh	John C. Osborne		Calvin Jones				

## HISTORY OF THE MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA FROM 1849 TO 1951

\*Missing Data Not to be Found in Record

Date	Place of Meeting	Number in Attendance	President	Vice Presidents*	Secretary	Treasurer*	Members on Roll*	Honorary Members*	Honorary Fellows*
1849	Raleigh	25	F. J. Hill		W. H. McKee		25		
1 1850	Raleigh	21	E. Strudwick	F. J. Haywood, C. E. Johnson, J. E. Williamson, W. G. Thomas	W. H. McKee	W. G. Hill	38	9	
2 1851	Raleigh	23	E. Strudwick	C. E. Johnson	W. H. McKee	W. G. Hill	46	0	
3 1852	Wilmington	38	J. E. Williamson	Thomas N. Cameron, William G. Hill, Johnston B. Jones, N. J. Pittman	E. B. Haywood	J. J. W. Tucker	72	12	
4 1853	Fayetteville	24	J. E. Williamson	William G. Hill, Johnston B. Jones, J. B. G. Myers, N. J. Pittman	W. W. Harris	Daniel Dupree	80	14	
5 1854	Raleigh	37	J. H. Dickson	N. J. Pittman, J. B. G. Myers, J. Graham Tull, A. D. McLean	S. S. Satchwell	Daniel Dupree	84	17	
6 1855	Salisbury	23	J. H. Dickson	J. Graham Tull, Owen Hadley, A. D. McLean, Hugh Kelly	S. S. Satchwell	J. B. Dunn	96	18	
7 1856	Raleigh	35	C. E. Johnson	Marcellus Whitehead, E. R. Gibson, Johnston B. Jones, O. F. Manson	S. S. Satchwell	J. B. Dunn	101	22	
8 1857	Edenton	25	C. E. Johnson	Marcellus Whitehead, O. F. Manson, H. W. Faison, E. T. Gibson	W. G. Thomas	J. B. Dunn	113	16	
9 1858	New Bern	69	W. H. McKee	Edward Warren, C. W. Graham, Caleb Winslow, A. B. Pierce	W. G. Thomas	J. B. Dunn	172	18	
10 1859	Statesville	81	W. H. McKee	James G. Ramsey, P. E. Hines, J. R. Mercer, W. T. Howard	W. G. Thomas	C. W. Graham			
11 1860	Washington	64	N. J. Pittman	P. T. Henry, R. H. Winborne, M. Whitehead, T. S. Leach	W. G. Thomas	C. W. Graham	233	18	
12 1861	Morganton	23	N. J. Pittman	J. J. Summerell, C. T. Murphy, G. W. Hodges, W. A. B. Norcom	W. G. Thomas	C. W. Graham	244	18	
13 1866	Raleigh	20	J. J. Summerell	E. Burke Haywood, R. H. Winborne, W. L. Barrow, J. W. Jones	W. G. Thomas	C. W. Graham			
14 1867	Tarboro	41	W. G. Thomas		S. S. Satchwell	C. W. Graham	288	11	
15 1868	Warrenton	27	S. S. Satchwell	Hugh Kelly, George A. Foote, Charles J. O'Hagan, J. H. Baker	Thomas F. Wood	J. W. Jones			
16 1869	Salisbury	36	E. B. Haywood	Thomas E. Wilson, A. B. Pierce, C. T. Murphy, M. A. Locke	Thomas F. Wood	J. W. Jones			
17 1870	Wilmington	38	C. J. O'Hagan	E. A. Anderson, F. N. Luckey, W. R. Sharpe, R. L. Payne	Thomas F. Wood	J. W. Jones			
18 1871	Raleigh	35	Hugh Kelley	D. N. Patterson, R. C. Pearson, J. B. Seavy, G. L. Kirby	Thomas F. Wood	J. W. Jones			
19 1872	New Bern	34	W. G. Hill	H. W. Faison, R. I. Hicks, G. H. Macon, W. A. B. Norcom	James McKee	J. W. Jones			
20 1873	Statesville	43	M. Whitehead	W. T. Ennett, William Little, Charles Duffy, P. T. Jerman	James McKee	H. T. Bahnson			
21 1874	Charlotte	56	W. A. B. Norcom	J. B. Jones, R. F. Lewis, C. G. Cox, J. L. Knight	James McKee	H. T. Bahnson			
22 1875	Wilson	60	J. W. Jones	Walker Debnam, J. A. Gibson, William Little, D. N. Patterson	James McKee	H. T. Bahnson	148	5	
23 1876	Fayetteville	33	Peter E. Hines	J. H. Baker, G. G. Smith, T. D. Haigh, J. K. Hall	James McKee	H. T. Bahnson	157	4	
24 1877	Salem	42	George A. Foote	J. K. Hall, B. W. Robinson, A. Holmes, A. A. Hill	James McKee	A. G. Carr	177	4	
25 1878	Goldsboro	79	R. L. Payne	E. M. Rountree, Richard Anderson, S. B. Flowers, L. A. Stith	L. J. Picot	A. G. Carr	194	6	
26 1879	Greensboro	109	Chas. Duffy, Jr.	J. A. Gibson, Willis Alston, James McKee, A. A. Hill	L. J. Picot	A. G. Carr	198	6	
27 1880	Wilmington	105	J. F. Shaffner	J. K. Hall, W. C. McDuffie, W. R. Wilson, R. F. Lewis	L. J. Picot	A. G. Carr	225	6	
28 1881	Asheville	92	R. B. Haywood	J. E. McKee, W. H. Lilly, R. H. Speight, W. J. H. Bellamy	L. J. Picot	A. G. Carr	254	6	
29 1882	Concord	65	Thos. F. Wood	T. J. Moore, D. J. Cain, S. E. Evans, John McDonald	L. J. Picot	A. G. Carr	297	7	
30 1883	Tarboro	112	J. K. Hall	A. W. Knox, J. M. Hadley, E. S. Foster, John Whitehead	L. J. Picot	A. G. Carr	310	7	
31 1884	Raleigh	112	A. B. Pierce	F. W. Potter, G. W. Graham, R. Dillard, G. W. Long	L. J. Picot	A. G. Carr	348	7	
32 1885	Durham	173	W. C. McDuffie	James McKee, T. E. Anderson, W. H. Whitehead, A. G. Carr	W. C. Murphy	R. L. Payne, Jr.	424	6	



## HISTORY OF THE MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA FROM 1849 TO 1951—Continued

\*Missing Data Not to be Found in Record

Date	Place of Meeting	Number in Attendance	President	Vice Presidents	Secretary	Treasurer	Members on Roll	Honorary Members	Honorary Fellows*
1886	New Bern	113	Joseph Graham	H. T. Bahnson, L. J. Picot, J. L. McMillan, W. W. Faison	J. M. Baker	R. L. Payne, Jr.	438	7	
1887	Charlotte	112	H. T. Bahnson	G. G. Smith, J. L. Nicholson, C. M. Van Poole, H. B. Ferguson	J. M. Baker	R. L. Payne, Jr.	452	7	
1888	Fayetteville	133	T. D. Haigh	W. T. Ennett, J. A. Dunn, T. E. Anderson	J. M. Baker	C. M. Van Poole	306	6	
1889	Elizabeth City	50	W. T. Ennett	W. J. Jones, S. W. Stevenson, G. W. Long	J. M. Baker	C. M. Van Poole	410	6	
1890	Oxford	160	G. G. Thomas	R. L. Payne, Jr., Richard Dillard, S. D. Booth	J. M. Hays	C. M. Van Poole	414	6	
1891	Asheville	135	R. H. Lewis	S. W. Battle, J. L. Nicholson, W. H. Lilly	J. M. Hays	C. M. Van Poole	422	6	
1892	Wilmington	162	W. T. Cleatham	T. S. Burbank, J. W. Long, W. H. H. Cobb, W. D. Hillard	J. M. Hays	C. M. Van Poole	431	6	
1893	Raleigh	221	J. W. McNeill	W. C. Galloway, H. H. Harris, J. M. Hadley, Thomas Hill	R. D. Jewett	M. P. Perry	447	5	3
1894	Greensboro	166	W. H. H. Cobb	J. A. Hodges, R. W. Tate, Willis Alston, M. H. Fletcher	R. D. Jewett	M. P. Perry	454	5	3
1895	Goldstboro		J. H. Tucker	J. Howell Way, W. H. Harrell, O. McMullan, C. A. Misenheimer	R. D. Jewett	M. P. Perry	436	7	3
1896	Winston-Salem	158	R. L. Payne	S. D. Booth, J. P. Munroe, J. A. Burroughs, J. E. Grimsley	R. D. Jewett	M. P. Perry	452	7	3
1897	Morehead City	103	P. L. Murphy	J. C. Walton, A. A. Kent, M. R. Adams, B. L. Long	R. D. Jewett	M. P. Perry	406	6	3
1898	Charlotte	*	Francis Duffy	E. C. Register, A. T. Cotton, J. H. B. Knight, F. H. Russell	R. D. Jewett	M. P. Perry	437	6	21
1899	Asheville	152	L. J. Picot	I. W. Faison, J. W. White, H. H. Dodson, W. C. Brownson	Geo. W. Presley	G. T. Sikes	489	6	16
1900	Farboro	115	George W. Long	C. M. Van Poole, James M. Parrott, T. B. Williams, W. D. Hillard	Geo. W. Presley	G. T. Sikes	482	6	21
1901	Durham	156	Julian M. Baker	M. H. Fletcher, C. A. Julian, D. A. Stanton, E. M. Summerell	Geo. W. Presley	G. T. Sikes	515	5	18
1902	Wilmington	147	Robert S. Young	A. G. Carr, E. D. Dixon-Carroll, I. M. Taylor, J. M. Parrott	Geo. W. Presley	G. T. Sikes	546	5	20
1903	Hot Springs	155	A. W. Knox	E. G. Moore, C. A. Julian, W. W. McKenzie, J. L. Nicholson	J. Howell Way	G. T. Sikes	530	6	19
1904	Raleigh	320	H. B. Weaver	John Hey Williams, John C. Rodman, S. F. Pfohl	J. Howell Way	G. T. Sikes	1,033	8	17
1905	Greensboro	361	David T. Tayloe	C. A. Julian, John T. Burrus, I. W. Faison	J. Howell Way	G. T. Sikes	1,175	8	17
1906	Charlotte	406	E. C. Register	L. B. McBrayer, W. H. Cobb, Jr., W. O. Spencer	J. Howell Way	G. T. Sikes	1,234	8	16
1907	Morehead City	217	Samuel D. Booth	C. M. Strong, J. E. McLaughlin, W. F. Hargrove	David A. Stanton	H. McK. Tucker	888	7	16
1908	Winston-Salem	372	J. Howell Way	J. E. Stokes, J. A. Turner, W. H. Dixon	David A. Stanton	H. McK. Tucker	998	7	28
1909	Asheville	337	J. F. Highsmith	C. M. Van Poole, D. A. Garrison, D. O. Dees	David A. Stanton	H. McK. Tucker	1,067	7	25
1910	Wrightsville Beach	276	J. A. Burroughs, E. J. Wood	E. J. Wood, John Q. Myers, L. D. Wharton	David A. Stanton	H. D. Walker	1,080	8	35
1911	Charlotte	412	C. M. Van Poole	J. V. McGougan, W. E. Warren, L. N. Glenn	David A. Stanton	H. D. Walker	880	8	45
1912	Hendersonville	296	A. A. Kent	J. P. Monroe, W. P. Horton, J. G. Murphy	David A. Stanton	H. D. Walker	950	8	44
1913	Morehead City	232	J. P. Munroe	F. R. Harris, E. S. Bullock, L. B. Morse	John A. Ferrell	H. D. Walker	1,133	8	40
1914	Raleigh	431	J. M. Parrott	E. T. Dickinson, J. T. J. Battle, D. E. Sevier	John A. Ferrell	H. D. Walker	1,228	8	47
1915	Greensboro	443	L. B. McBrayer	J. J. Phillips, C. W. Moseley, S. M. Crowell	John A. Ferrell	H. D. Walker	1,221	9	68
1916	Durham	406	M. H. Fletcher	J. L. Nicholson, L. N. Glenn, W. H. Hardison	Benj. K. Hays	W. M. Jones	1,228	10	79
1917	Asheville	280	Charles O'H. Laughinghouse	D. J. Hill, J. L. Spruill, J. H. Shuford	Benj. K. Hays	W. M. Jones	1,271	11	81
1918	Pinehurst	291	I. W. Faison	Wm. deB. MacNider, Jos. B. Greene, Ben F. Royal	Benj. K. Hays	W. M. Jones	1,087	11	81
1919	Pinehurst	335	Cyrus Thompson	J. W. Halford, T. W. Davis, A. McN. Blair	Sec.-Treas. Benj. K. Hays	Acting Sec.-Treas L. B. McBrayer	1,306	11	100
1920	Charlotte	479	C. V. Reynolds	H. D. Walker, F. Stanley Whitaker, Thos. I. Fox	Benj. K. Hays	L. B. McBrayer	1,497	12	100
1921	Pinehurst	404	T. E. Anderson	C. S. Lawrence, W. H. Ward, J. M. Manning	Benj. K. Hays	L. B. McBrayer	1,491	12	93
1922	Winston-Salem	507	H. A. Royster	W. T. Parrott, B. C. Nalle, J. R. McCracken		Sec.-Treas. L. B. McBrayer	1,571	12	100
1923	Asheville	356	J. W. Long	F. M. Hanes, T. C. Johnson, B. L. Long		L. B. McBrayer	1,592	9	101
1924	Raleigh	525	J. V. McGougan	J. L. Spruill, Eugene B. Glenn, D. A. Garrison		L. B. McBrayer	1,604	9	106
1925	Pinehurst	550	Albert Anderson	W. L. Dunn, A. E. Bell, K. G. Averitt		L. B. McBrayer	1,657	10	116
1926	Wrightsville Beach	445	Wm. deB. MacNider	J. P. Matheson, W. W. Dawson, H. H. Bass		L. B. McBrayer	1,663	10	107
1927	Durham	653	John Q. Myers	J. W. Carroll, A. Y. Linville, C. H. Coker		L. B. McBrayer	1,691	10	121
1928	Pinehurst	611	John T. Burrus	G. H. Macon, R. F. Leinbach, W. R. Griffin		L. B. McBrayer	1,738	11	143
1929	Greensboro	671	Thurman D. Kitchin	W. L. Dunn, Asheville, D. T. Tayloe, Jr., Washington, W. D. James, Hamlet		L. B. McBrayer	1,666	11	146
1930	Pinehurst	701	L. A. Crowell	W. B. Murphy, Wm. E. Warren, N. B. Adams		L. B. McBrayer	1,711	11	155

## HISTORY OF THE MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA FROM 1849 TO 1951—Continued

Date	Place of Meeting	Number in Attendance	President	President-Elect	Vice Presidents	Sec.-Treas.	Members on Roll	Honorary Members	Honorary Fellows
78 1931	Durham.....	714	J. G. Murphy.....	M. L. Stevens.....	C. A. Julian, Greensboro J. W. Davis, Statesville.....	L. B. McBrayer.....	1,600	10	164
79 1932	Winston-Salem.....	740	M. L. Stevens.....	Jno. B. Wright.....	C. W. Banner, Greensboro W. W. Sawyer, Elizabeth City.....	L. B. McBrayer.....	1,559	10	166
80 1933	Raleigh.....	714	Jno. B. Wright.....	I. H. Manning.....	J. R. McCracken, Waynesville.....	L. B. McBrayer.....	1,363	10	181
81 1934	Pinehurst.....	728	I. H. Manning.....	P. P. McCain.....	W. G. Suiter, Weldon R. L. Felts, Durham.....	L. B. McBrayer.....	1,563	10	210
82 1935	Pinehurst.....	706	P. P. McCain.....	Paul H. Ringer.....	H. D. Walker, Elizabeth City J. F. McKay, Buie's Creek William Allan, Charlotte.....	L. B. McBrayer.....	1,619	10	215
83 1936	Asheville.....	583	Paul H. Ringer.....	C. F. Strosnider.....	J. K. Pepper, Winston-Salem E. S. Bulluck, Wilmington.....	L. B. McBrayer.....	1,462	10	235
84 1937	Winston-Salem.....	767	C. F. Strosnider.....	Wingate M. Johnson.....	C. A. Woodward, Wilson Jno. F. Brownsberger, Fletcher.....	L. B. McBrayer.....	1,503	7	253
85 1938	Pinehurst.....	802	Wingate M. Johnson.....	J. Buren Sidbury.....	R. B. McKnight, Charlotte J. F. Abel, Waynesville.....	T. W. M. Long.....	1,715	7	284
86 1939	Cruise to Bermuda..	319	J. Buren Sidbury.....	William Allan.....	C. B. Williams, Elizabeth City M. D. Hill, Raleigh.....	T. W. M. Long.....	1,605	8	313
87 1940	Pinehurst.....	835	William Allan.....	Hubert B. Haywood.....	F. Webb Griffith, Asheville Frank C. Smith, Charlotte.....	T. W. M. Long.....	1,661	7	311
88 1941	Pinehurst.....	755	Hubert B. Haywood.....	F. Webb Griffith.....	D. W. Holt, Greensboro T. C. Kerns, Durham.....	T. W. M. Long (1) I. H. Manning.....	1,700	7	309
89 1942	Charlotte.....	710	F. Webb Griffith.....	Donnel B. Cobb.....	Thos. DeL. Sparrow, Charlotte T. L. Carter, Gatesville.....	Roscoe D. McMillan.....	1,837	8	350
90 1943	Raleigh.....	736	Donnell B. Cobb.....	James W. Vernon.....	George S. Coleman, Raleigh Julian Moore, Asheville.....	Roscoe D. McMillan.....	1,919	8	361
91 1944	Pinehurst.....	760	James W. Vernon.....	Paul F. Whitaker.....	Fred C. Hubbard, North Wilkesboro George L. Carrington, Burlington.....	Roscoe D. McMillan.....	1,982	8	363
1945	No meeting because of O.D.T. restrictions	-----	Paul F. Whitaker.....	Oren Moore.....	Wm. H. Smith, Goldsboro Zack D. Owens, Elizabeth City.....	Roscoe D. McMillan.....	1,811	7	383
92 1946	Pinehurst.....	889	Oren Moore.....	-----	Wm. H. Smith, Goldsboro Zack D. Owens, Elizabeth City.....	Roscoe D. McMillan.....	1,939	6	397
93 1947	Virginia Beach, Va..	444	Wm. M. Coppridge.....	Frank A. Sharpe.....	G. E. Bell, Wilson J. B. Bullitt, Chapel Hill.....	Roscoe D. McMillan.....	2,191	7	404
94 1948	Pinehurst.....	920	Frank A. Sharpe (2).....	James F. Robertson.....	V. K. Hart, Charlotte J. G. Raby, Tarboro.....	Roscoe D. McMillan.....	2,298	8	407
95 1949	Pinehurst.....	998	James F. Robertson.....	G. Westbrook Murphy.....	Joseph J. Combs, Raleigh Joseph A. Elliott, Charlotte.....	Roscoe D. McMillan.....	2,318	5	405
96 1950	Pinehurst.....	947	G. Westbrook Murphy.....	Roscoe D. McMillan.....	Ben F. Royal Joseph A. Elliott.....	Millard D. Hill.....	2,283	5	455
97 1951	Pinehurst.....	938	Roscoe D. McMillan.....	Frederic C. Hubbard.....	Joseph A. Elliott Henderson Irwin.....	Millard D. Hill.....	2,341	5	469

†Died during his term of office; succeeded by E. J. Wood, first vice president. ‡Died during term of office. (1) Died during term of office; succeeded by I. H. Manning.  
(2) Died during term of office; succeeded by James F. Robertson, president-elect.





STATUS OF MEMBERSHIP BY COUNTIES—Continued

COUNTY	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951
Mitchell-Avery 3	6	5	5																			
Mitchell-Watauga 14																						
Mitchell-Yancey	9	10	9	7	9	9	8	7	3	6	4	5	7	5	7	3	5	7	10	13	10	10
Montgomery 15	17	21	21	18	22	21	19	22	21	20	19	17	22	21	21	20	22	23	26	26	28	28
Moore	33																					
Nash 16	37	35	35	25	35	39	34	36	32	39	37	38	43	44	45	40	49	55	62	53	56	56
New Hanover	28	4	4	4	4	4	4	4	4	4	3	5	8	8	8	8	2	3	4	4	4	4
Northampton	5	5	6	6	6	5	2	5	4	4	3	5	8	8	8	8	8	10	10	12	11	11
Onslow																						
Orange 17	4	4	4	4	4	4	4	4	4	4	4	3	3	3	4	5	4	4	4	4	4	4
Pamlico																						
Pasquotank-Camden-Currituck-Dare																						
Pasquotank-Camden-Dare 8	17	14	11	12	14	12	11	9		9	11	10	14	13	12	14	16	17	21	16	20	20
Pender	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1				2
Perquimans 18	6	6	6	7	7	8	7	7	8	8	9	8	8	9	8	6	6	6	6	6	6	7
Pitt	27	27	20	14	22	26	24	26	30	29	28	25	26	26	31	32	30	31	32	29	31	31
Polk	6	5	7	7	6	6	4	5	5	5	6	6	6	6	7	5	6	7	5	5	5	5
Randolph	8	14	10	11	13	10	13	10	11	11	13	12	12	12	13	14	16	20	16	19	20	20
Richmond	17	15	15	15	15	15	15	15	17	16	13	16	15	15	17	17	18	20	20	20	20	20
Robeson	24	21	22	23	25	27	28	29	34	33	35	35	35	36	38	38	38	40	47	47	45	45
Rockingham	24	24	21	22	23	21	18	20	18	22	22	22	22	24	20	20	29	28	40	31	30	30
Rowan-Davie	35	39	33	24	34	30	27	28	26	24	27	34	33	33	33	42	41	41	41	47	46	44
Rutherford	22	21	21	19	20	21	23	22	23	23	24	22	22	22	23	22	20	24	35	24	21	21
Sampson	13	13	14	14	14	14	14	16	16	16	18	18	16	15	15	10	16	15	16	14	15	15
Scotland	10	11	11	11	11	11	10	11	10	10	10	10	10	10	10	10	9	12	10	13	13	13
Stanly 15	16	15	13	12	16	17	18	19	18	20	16	17	20	20	17	16	18	21	26	26	22	22
Stokes	2	6	6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Stokes	2	6	6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Surry 19	20	13	17	12	25	22	17	15	14	12	18	16	19	19	23	27	2	29	31	32	29	29
Surry-Yadkin																						
Swain 10																						
Transylvania	2	2	1	3	2	2	4	5	3	3	3	7	3	3	3	2	2	6	6	4	7	8
Tyrrell 20																						
Union	13	10	9	10	10	11	10	8	11	13	13	14	15	14	14	3	13	14	14	14	15	15
Wake	12	8	7	8	9	9	8	8	6	10	10	10	12	10	10	96	11	11	12	12	11	11
Wake	94	87	86	87	89	88	89	95	100	95	94	93	87	98	96	92	92	110	108	114	120	126
Warren	6	6	6	5	5	6	2	2	2	2	3	2	3	4	5	5	6	6	5	6	6	6
Washington-Tyrrell 11	3	3	3																			
Watauga 21																						
Watauga-Ashe 22																						
Wayne	38	30	32	22	27	29	27	29	30	31	34	33	35	38	38	37	37	38	37	37	37	37
Wilkes 2	10	11	10																			
Wilkes-Alleghany																						
Wilson	28	28	22	21	25	29	31	25	25	24	25	27	27	31	29	27	30	33	33	35	28	28
Yadkin 19	10	4	1																			
Yancey	4	1	1																			
Totals	1,694	1,690	1,559	1,363	1,563	1,619	1,462	1,503	1,715	1,605	1,601	1,694	1,837	1,919	1,982	1,811	1,939	2,191	2,298	2,318	2,278	2,343

(1) See Iredell-Alexander. (2) See Wilkes-Alleghany. (3) See Watauga-Ashe and Ashe-Watauga. (4) See Mitchell-Avery. (5) See Pasquotank-Camden-Dare and Pasquotank-Camden-Currituck-Dare. (6) See Alamance-Caswell. (7) See Macon-Clay. (8) See Pasquotank-Camden-Currituck-Dare. (9) See Rowan-Davie. (10) See Jackson-Swain. (11) See Martin-Washington-Tyrrell. (12) See Mitchell-Avery. (13) See Avery and Mitchell. (14) See Mitchell-Watauga-Ashe. (15) See Stanley-Montgomery, Montgomery, and Stanly. (16) See Edgecombe-Nash. (17) See Durham-Orange. (18) See Chowan-Perquimans. (19) See Surry-Yadkin. (20) See Washington-Tyrrell and Martin-Washington-Tyrrell. (21) See Mitchell-Watauga, Watauga-Ashe, and Ashe-Watauga. (22) See Ashe-Watauga.



# **ROSTER OF MEMBERS NORTH CAROLINA STATE BOARD OF HEALTH FROM ORGANIZATION IN 1877 TO 1951**

<i>Name</i>	<i>Address</i>	<i>Appointed by</i>	<i>Term</i>
S. S. Satchwell, M.D., President.....	Rocky Point.....	State Society.....	1877 to 1878
Thomas F. Wood, M.D., Secretary.....	Wilmington.....	State Society.....	1877 to 1878
Joseph Graham, M.D.....	Charlotte.....	State Society.....	1877 to 1878
Charles Duffy, Jr., M.D.....	New Bern.....	State Society.....	1877 to 1878
Peter E. Hines, M.D.....	Raleigh.....	State Society.....	1877 to 1878
George A. Foote, M.D.....	Warrenton.....	State Society.....	1877 to 1878
S. S. Satchwell, M.D., President.....	Rocky Point.....	State Society.....	1878 to 1884
Thomas F. Wood, M.D., Secretary.....	Wilmington.....	State Society.....	1878 to 1884
Charles J. O'Hagan, M.D., President.....	Greenville.....	State Society.....	1878 to 1882
George A. Foote, M.D.....	Warrenton.....	State Society.....	1878 to 1882
Marcellus Whitehead, M.D.....	Salisbury.....	State Society.....	1878 to 1880
R. L. Payne, M.D.....	Lexington.....	State Society.....	1878 to 1880
H. G. Woodfin, M.D.....	Franklin.....	Gov. Z. B. Vance.....	1878 to 1880
A. R. Ledoux, Chemist.....	Chapel Hill.....	Gov. Z. B. Vance.....	1878 to 1880
William Cain, Civil Engineer.....	Charlotte.....	Gov. Z. B. Vance.....	1878 to 1880
R. L. Payne, M.D.....	Lexington.....	State Society.....	1881 to 1887
M. Whitehead, M.D., President.....	Salisbury.....	State Society.....	1881 to 1884
S. H. Lyle, M.D.....	Franklin.....	Gov. T. J. Jarvis.....	1881 to 1883
William Cain, Civil Engineer.....	Charlotte.....	Gov. T. J. Jarvis.....	1881 to 1883
W. G. Simmons, Chemist.....	Wake Forest.....	Gov. T. J. Jarvis.....	1881 to 1883
J. W. Jones, M.D., President.....	Wake Forest.....	State Society.....	1883 to 1889
John McDonald, M.D.....	Washington.....	State Society.....	1883 to 1889
S. H. Lyle, M.D.....	Franklin.....	Gov. T. J. Jarvis.....	1883 to 1885
W. G. Simmons, Chemist.....	Wake Forest.....	Gov. T. J. Jarvis.....	1883 to 1885
Arthur Winslow, Civil Engineer.....	Raleigh.....	Gov. T. J. Jarvis.....	1884 to 1886
R. H. Lewis, M.D.....	Raleigh.....	State Board of Health.....	1884 to 1886
Thomas F. Wood, M.D., Secretary.....	Wilmington.....	State Society.....	1885 to 1887
William D. Hilliard, M.D.....	Asheville.....	State Society.....	1885 to 1891
Arthur Winslow, Civil Engineer.....	Raleigh.....	Gov. A. M. Scales.....	1885 to 1891
W. G. Simmons, Chemist.....	Wake Forest.....	Gov. A. M. Scales.....	1885 to 1887
J. H. Tucker, M.D.....	Henderson.....	Gov. A. M. Scales.....	1885 to 1887
R. H. Lewis, M.D., Secretary.....	Raleigh.....	State Society.....	1887 to 1888
H. T. Bahnson, M.D., President.....	Winston.....	State Society.....	1887 to 1888
Arthur Winslow, Civil Engineer.....	Raleigh.....	Gov. A. M. Scales.....	1887 to 1889
W. G. Simmons, Chemist.....	Wake Forest.....	Gov. A. M. Scales.....	1887 to 1889
J. H. Tucker, M.D.....	Henderson.....	Gov. A. M. Scales.....	1888 to 1891
J. L. Ludlow, Civil Engineer.....	Winston.....	Gov. A. M. Scales.....	1888 to 1891
J. H. Tucker, M.D.....	Henderson.....	Gov. D. G. Fowle.....	1888 to 1891
F. P. Venable, Ph.D., Chemist.....	Chapel Hill.....	Gov. D. G. Fowle.....	1889 to 1893
J. L. Ludlow, Civil Engineer.....	Winston.....	Gov. D. G. Fowle.....	1889 to 1892
J. A. Hodges, M.D.....	Fayetteville.....	State Society.....	1889 to 1893
J. M. Baker, M.D.....	Tarboro.....	State Society.....	1891 to 1893
J. H. Tucker, M.D.....	Henderson.....	Gov. T. M. Holt.....	1891 to 1893
F. P. Venable, Ph.D., Chemist.....	Chapel Hill.....	Gov. T. M. Holt.....	1891 to 1892
J. L. Ludlow, Civil Engineer.....	Winston.....	Gov. T. M. Holt.....	1892 to 1897
Thomas F. Wood, M.D., Secretary†.....	Wilmington.....	State Society.....	1891 to 1895
George G. Thomas, M.D., President.....	Wilmington.....	State Board of Health.....	1892 to 1895
S. Westray Battle, M.D.....	Asheville.....	State Society.....	1893 to 1895
W. H. Harrell, M.D.....	Williamston.....	State Society.....	1893 to 1895
John Whitehead, M.D.....	Salisbury.....	State Board of Health.....	1893 to 1895
W. H. G. Lucas.....	White Hall.....	Gov. Elias Carr.....	1893 to 1895
F. P. Venable, Ph.D., Chemist.....	Chapel Hill.....	Gov. Elias Carr.....	1893 to 1895
John C. Chase, Civil Engineer.....	Wilmington.....	Gov. Elias Carr.....	1894 to 1897
R. H. Lewis, M.D., Secretary.....	Raleigh.....	Gov. Elias Carr.....	1895 to 1897
W. P. Beall, M.D.....	Greensboro.....	Gov. Elias Carr.....	1895 to 1897
W. J. Lumsden, M.D.....	Elizabeth City.....	Gov. Elias Carr.....	1895 to 1897
John Whitehead, M.D.....	Salisbury.....	State Society.....	1895 to 1897
W. H. Harrell, M.D.....	Williamston.....	State Society.....	1895 to 1897
W. P. Beall, M.D.....	Greensboro.....	Gov. Elias Carr.....	1895 to 1897
R. H. Lewis, M.D., Secretary.....	Raleigh.....	Gov. Elias Carr.....	1897 to 1899
F. P. Venable, Ph.D., Chemist.....	Chapel Hill.....	Gov. Elias Carr.....	1897 to 1899
John C. Chase, Civil Engineer.....	Wilmington.....	Gov. Elias Carr.....	1897 to 1899
Charles J. O'Hagan, M.D.....	Greenville.....	Gov. D. L. Russell.....	1897 to 1899
John D. Spicer, M.D.....	Goldsboro.....	Gov. D. L. Russell.....	1897 to 1899
J. L. Nicholson, M.D.....	Richlands.....	Gov. D. L. Russell.....	1899 to 1901
R. H. Lewis, M.D., Secretary.....	Raleigh.....	Gov. D. L. Russell.....	1899 to 1901
A. W. Shaffer, Civil Engineer.....	Raleigh.....	Gov. D. L. Russell.....	1899 to 1901
Charles J. O'Hagan, M.D.....	Greenville.....	Gov. D. L. Russell.....	1899 to 1901
J. L. Nicholson, M.D.....	Richlands.....	Gov. D. L. Russell.....	1899 to 1901
Albert Anderson, M.D.....	Wilson.....	Gov. D. L. Russell.....	1899 to 1901
George G. Thomas, M.D., President.....	Wilmington.....	State Society.....	1899 to 1901

† Died in 1892, leaving a five-year unexpired term, which was filled by the Board.

Name	Address	Appointed by	Term
S. Westray Battle, M.D.	Asheville	State Society	1899 to 1901
H. W. Lewis, M.D.	Jackson	State Society	1899 to 1901
H. H. Dodson, M.D.	Milton	State Society	1901 to 1907
R. H. Lewis, M.D., Secretary	Raleigh	Gov. C. B. Aycock	1901 to 1907
W. P. Ivey, M.D.	Lenoir	Gov. C. B. Aycock	1901 to 1907
George G. Thomas, M.D., President	Wilmington	Gov. C. B. Aycock	1901 to 1905
Francis Duffy, M.D.	New Bern	Gov. C. B. Aycock	1901 to 1905
J. L. Ludlow, Civil Engineer	Winston	Gov. C. B. Aycock	1901 to 1905
S. Westray Battle, M.D.	Asheville	State Society	1901 to 1907
H. W. Lewis, M.D.	Jackson	State Society	1901 to 1907
W. H. Whitehead, M.D.	Rocky Mount	State Society	1901 to 1905
J. L. Nicholson, M.D.	Richlands	State Society	1901 to 1905
J. L. Ludlow, Civil Engineer	Winston	Gov. C. B. Aycock	1903 to 1909
J. Howell Way, M.D.	Waynesville	Gov. R. B. Glenn	1905 to 1911
W. O. Spencer, M.D.	Winston	Gov. R. B. Glenn	1905 to 1911
George G. Thomas, M.D., President	Wilmington	State Society	1905 to 1911
Thomas E. Anderson, M.D.	Statesville	State Society	1907 to 1913
R. H. Lewis, M.D.	Raleigh	Gov. R. B. Glenn	1907 to 1913
E. C. Register, M.D.	Charlotte	Gov. R. B. Glenn	1907 to 1909
David T. Tayloe, M.D.	Washington	State Society	1907 to 1913
James A. Burroughs, M.D. <sup>1</sup>	Asheville	State Society	1909 to 1913
J. E. Ashcraft, M.D.	Monroe	State Board of Health	1909 to 1913
J. L. Ludlow, Civil Engineer	Winston-Salem	Gov. W. W. Kitchin	1911 to 1917
J. Howell Way, M.D., President	Waynesville	Gov. W. W. Kitchin	1911 to 1917
W. O. Spencer, M.D.	Winston-Salem	Gov. W. W. Kitchin	1911 to 1917
Thomas E. Anderson, M.D.	Statesville	State Society	1911 to 1917
Charles O'H. Laughinghouse, M.D.	Greenville	State Society	1913 to 1919
R. H. Lewis, M.D.	Raleigh	Gov. Locke Craig	1913 to 1919
Edw. J. Wood, M.D.	Wilmington	Gov. Locke Craig	1913 to 1915
A. A. Kent, M.D. <sup>2</sup>	Lenoir	State Society	1913 to 1919
Cyrus Thompson, M.D.	Jacksonville	State Society	1913 to 1919
Fletcher R. Harris, M.D.	Henderson	State Board of Health	1915 to 1921
J. L. Ludlow, Civil Engineer	Winston-Salem	Gov. Locke Craig	1917 to 1923
J. Howell Way, M.D., President	Waynesville	Gov. T. W. Bickett	1917 to 1923
E. C. Register, M.D. <sup>1</sup>	Charlotte	Gov. T. W. Bickett	1917 to 1923
Thomas E. Anderson, M.D.	Statesville	State Society	1917 to 1923
Charles O'H. Laughinghouse, M.D.	Greenville	State Society	1919 to 1923
Fletcher R. Harris, M.D. <sup>3</sup>	Henderson	State Society	1919 to 1923
A. J. Crowell, M.D.	Charlotte	Gov. T. W. Bickett	1921 to 1923
Chas. E. Waddell, C.E. <sup>4</sup>	Asheville	Gov. C. Morrison	1919 to 1925
Cyrus Thompson, M.D.	Jacksonville	State Society	1919 to 1925
R. H. Lewis, M.D.	Raleigh	Gov. T. W. Bickett	1923 to 1925
E. J. Tucker, D.D.S.	Roxboro	Gov. T. W. Bickett	1923 to 1929
J. Howell Way, M.D., President	Waynesville	Gov. C. Morrison	1923 to 1929
A. J. Crowell, M.D.	Charlotte	Gov. C. Morrison	1923 to 1925
James P. Stowe, Ph.G.	Charlotte	Gov. C. Morrison	1923 to 1925
D. A. Stanton, M.D.	High Point	State Board of Health	1923 to 1929
Thomas E. Anderson, M.D.	Statesville	State Society	1923 to 1926
Charles O'H. Laughinghouse, M.D. <sup>5</sup>	Greenville	State Society	1925 to 1931
Cyrus Thompson, M.D. <sup>1</sup>	Jacksonville	State Society	1925 to 1931
D. A. Stanton, M.D.	High Point	State Society	1925 to 1931
R. H. Lewis, M.D. <sup>1</sup>	Raleigh	Gov. A. W. McLean	1926 to 1931
Jno. B. Wright, M.D. <sup>6</sup>	Raleigh	Gov. A. W. McLean	1925 to 1931
E. J. Tucker, D.D.S. <sup>6</sup>	Roxboro	Gov. A. W. McLean	1926 to 1927
W. S. Rankin, M.D. <sup>4</sup>	Charlotte	State Board of Health	1927 to 1929
L. E. McDaniel, M.D.	Jackson	State Board of Health	1927 to 1929
Chas. C. Orr, M.D.	Asheville	Gov. A. W. McLean	1929 to 1935
Thomas E. Anderson, M.D. <sup>6</sup>	Statesville	State Society	1929 to 1935
L. E. McDaniel, M.D. <sup>6</sup>	Jackson	State Society	1927 to 1933
James P. Stowe, Ph.G. <sup>6</sup>	Charlotte	Gov. A. W. McLean	1929 to 1935
A. J. Crowell, M.D. <sup>6</sup>	Charlotte	Gov. O. Max Gardner	1930 to 1931
J. M. Parrott, M.D. <sup>6</sup>	Kinston	State Board of Health	1929 to 1935
Chas. C. Orr, M.D. <sup>6</sup>	Asheville	Gov. O. Max Gardner	1931 to 1935
J. M. Parrott, M.D. <sup>5</sup>	Kinston	State Society	1931 to 1935
C. V. Reynolds, M.D.	Asheville	State Society	1931 to 1933
L. B. Evans, M.D.	Windsor	State Society	1931 to 1933
S. D. Craig, M.D.	Winston-Salem	State Society	1931 to 1933
John T. Burrus, M.D.	High Point	Gov. O. Max Gardner	1931 to 1933
J. N. Johnson, D.D.S.	Goldsboro	Gov. O. Max Gardner	1931 to 1933
J. A. Goode, Ph.G.	Asheville	Gov. O. Max Gardner	1931 to 1933
H. L. Large, M.D.	Rocky Mount	Gov. O. Max Gardner	1931 to 1935
H. G. Baity, C.E.	Chapel Hill	Gov. O. Max Gardner	1931 to 1935

<sup>1</sup> Died leaving unexpired term.<sup>2</sup> Resigned to become member of General Assembly.<sup>3</sup> Resigned to become Health Officer Vance County.<sup>4</sup> Resigned.<sup>5</sup> Resigned to become Secretary of State Board of Health.<sup>6</sup> Term terminated on account of the reorganization of the State Board of Health by General Assembly.



Name	Address	Appointed by	Term
Grady G. Dixon, M.D. <sup>7</sup>	Ayden	Ex. Com. State Society	1931 to 1932
Grady G. Dixon, M.D. <sup>7</sup>	Ayden	State Society	1932 to 1935
S. D. Craig, M.D.	Winston-Salem	State Society	1933 to 1937
W. T. Rainey, M.D.	Fayetteville	State Society	1933 to 1937
J. N. Johnson, D.D.S.	Goldsboro	Gov. J. C. B. Ehringhaus	1933 to 1937
Hubert B. Haywood, M.D.	Raleigh	Gov. J. C. B. Ehringhaus	1933 to 1937
James P. Stowe, Ph.G.	Charlotte	Gov. J. C. B. Ehringhaus	1933 to 1937
Grady G. Dixon, M.D.	Ayden	State Society	1935 to 1939
J. LaBruce Ward, M.D.	Asheville	State Society	1935 to 1939
H. Lee Large, M.D.	Rocky Mount	Gov. J. C. B. Ehringhaus	1935 to 1939
H. G. Baity, C.E.	Chapel Hill	Gov. J. C. B. Ehringhaus	1935 to 1939
J. N. Johnson, D.D.S.	Goldsboro	Gov. Clyde R. Hoey	1937 to 1941
Hubert B. Haywood, M.D.	Raleigh	Gov. Clyde R. Hoey	1937 to 1941
James P. Stowe, Ph.G.	Charlotte	Gov. Clyde R. Hoey	1937 to 1941
S. D. Craig, M.D.	Winston-Salem	State Society	1937 to 1941
W. T. Rainey, M.D.	Fayetteville	State Society	1937 to 1941
Grady G. Dixon, M.D.	Ayden	State Society	1939 to 1943
J. LaBruce Ward, M.D.	Asheville	State Society	1939 to 1943
H. Lee Large, M.D.	Rocky Mount	Gov. Clyde R. Hoey	1939 to 1943
H. G. Baity, Sc.D.	Chapel Hill	Gov. Clyde R. Hoey	1939 to 1943
C. C. Fordham, Jr., Ph.G. <sup>8</sup>	Greensboro	Gov. Clyde R. Hoey	1940 to 1943
S. D. Craig, M.D.	Winston-Salem	State Society	1941 to 1945
W. T. Rainey, M.D.	Fayetteville	State Society	1941 to 1945
Hubert B. Haywood, M.D.	Raleigh	Gov. J. Melville Broughton	1941 to 1945
J. N. Johnson, D.D.S.	Goldsboro	Gov. J. Melville Broughton	1941 to 1945
James O. Nolan, M.D.	Kannapolis	Gov. J. Melville Broughton	1941 to 1945
Grady G. Dixon, M.D.	Ayden	State Society	1943 to 1947
J. LaBruce Ward, M.D.	Asheville	State Society	1943 to 1947
H. Lee Large, M.D.	Rocky Mount	Gov. J. Melville Broughton	1943 to 1947
Larry I. Moore, Jr.	Wilson	Gov. J. Melville Broughton	1943 to 1947
S. D. Craig, M.D., Pres.	Winston-Salem	State Society	1945 to 1949
W. T. Rainey, M.D.	Fayetteville	State Society	1945 to 1949
Hubert B. Haywood, M.D.	Raleigh	Gov. R. Gregg Cherry	1945 to 1949
James O. Nolan, M.D.	Kannapolis	Gov. R. Gregg Cherry	1945 to 1949
Paul Jones, D.D.S. <sup>9</sup>	Farmville	Gov. R. Gregg Cherry	1946 to 1949
Jasper C. Jackson, Ph.G. <sup>10</sup>	Lumberton	Gov. R. Gregg Cherry	1945 to 1947
Grady G. Dixon, M.D., Pres.	Ayden	State Society	1947 to 1951
H. Lee Large, M.D.	Rocky Mount	Gov. R. Gregg Cherry	1947 to 1951
J. LaBruce Ward, M.D.	Asheville	State Society	1947 to 1951
Hubert B. Haywood, M.D.	Raleigh	Gov. W. Kerr Scott	1949 to 1953
Mrs. James B. Hunt	Lucama	Gov. W. Kerr Scott	1949 to 1953
A. C. Current, D.D.S.	Gastonia	Gov. W. Kerr Scott	1949 to 1953
John R. Bender, M.D.	Winston-Salem	State Society	1949 to 1953
Benjamin J. Lawrence, M.D.	Raleigh	State Society	1949 to 1953
G. Grady Dixon, M.D.	Ayden	Medical Society	1951 to 1955
George Curtis Crump, M.D.	Asheville	Medical Society	1951 to 1955
H. Lee Large, M.D.	Rocky Mount	Gov. W. Kerr Scott	1951 to 1955
H. C. Lutz, Phg.	Hickory	Gov. W. Kerr Scott	1951 to 1955

<sup>7</sup> To fill vacancy caused by resignation of Dr. J. M. Parrott.

<sup>8</sup> To fill vacancy caused by the death of James P. Stowe, Ph.G.

<sup>9</sup> To fill vacancy caused by resignation of J. N. Johnson, D.D.S.

<sup>10</sup> To fill vacancy caused by resignation of Larry I. Moore, Jr.

## ROSTER OF MEMBERS OF THE VARIOUS BOARDS OF MEDICAL EXAMINERS OF THE STATE OF NORTH CAROLINA

### FIRST BOARD

James H. Dickson, Wilmington	1859-1866
Charles E. Johnson, Raleigh	1859-1866
Caleb Winslow, Hertford	1859-1866
Otis F. Manson, Townsville	1859-1866
William H. McKee, Raleigh	1859-1866
Christopher Happoldt, Morganton	1859-1866
J. Graham Tull, New Bern	1859-1866
Samuel T. Iredell, Secretary	1859-1866

### SECOND BOARD

N. J. Pittman, Tarboro	1866-1872
E. Burke Haywood, Raleigh	1866-1872
R. H. Winborne, Edenton	1866-1872
S. S. Satchwell, Rocky Point	1866-1872
J. J. Summerell, Salisbury	1866-1872
R. B. Haywood, Raleigh	1866-1872
M. Whitehead, Salisbury	1866-1872
J. F. Shaffner, Salem	1866-1872
William Little, Secretary	1866-1872
Thomas F. Wood, Secretary, Wilmington	1867-1872

### THIRD BOARD

Charles J. O'Hagan, Greenville	1872-1878
W. A. B. Norcom, Edenton	1872-1878
C. Tate Murphy, Clinton	1872-1878
George A. Foote, Warrenton	1872-1878
J. W. Jones, Tarboro	1872-1878
R. L. Payne, Lexington	1872-1878
Charles Duffy, Jr., Secretary, New Bern	1872-1878

## FOURTH BOARD

Peter E. Hines, Raleigh.....	1878-1884
Thomas D. Haigh, Fayetteville.....	1878-1884
George L. Kirby, Goldsboro.....	1878-1884
Thomas F. Wood, Wilmington.....	1878-1884
Joseph Graham, Charlotte.....	1878-1884
Robert I. Hicks, Williamston <sup>1</sup> .....	1878-1880
Richard H. Lewis, Raleigh <sup>2</sup> .....	1880-1884
Henry T. Bahnson, Secretary, Salem.....	1878-1884

## FIFTH BOARD

William R. Wood, Scotland Neck.....	1884-1890
Augustus W. Knox, Raleigh.....	1884-1890
Francis Duffy, New Bern.....	1884-1890
Patrick L. Murphy, Morganton.....	1884-1890
Willis Alston, Littleton.....	1884-1890
J. A. Reagan, Weaverville.....	1884-1890
W. J. H. Bellamy, Secretary, Wilmington.....	1884-1890

SIXTH AND SEVENTH BOARDS<sup>3</sup>

R. L. Payne, Jr., Lexington.....	1890-1892
George W. Purefoy, Asheville.....	1890-1892
George G. Thomas, Wilmington.....	1890-1894
Robert S. Young, Concord.....	1890-1894
William H. Whitehead, Rocky Mount.....	1890-1896
George W. Long, Graham.....	1890-1896
L. J. Picot, Secretary, Littleton.....	1890-1896
Julian M. Baker, Tarboro.....	1892-1898
H. B. Weaver, Secretary, Asheville.....	1892-1898
J. M. Hays, Greensboro <sup>4</sup> .....	1894-1897
Kemp P. Battle, Jr., Raleigh <sup>5</sup> .....	1897-1900
Thomas S. Burbank, Wilmington <sup>1</sup> .....	1894-1898
Richard H. Whitehead, Chapel Hill <sup>4</sup> .....	1896-1898
William H. H. Cobb, Goldsboro <sup>6</sup> .....	1898-1900
J. Howell Way, Secretary, Waynesville <sup>7</sup> .....	1898-1902
David T. Tayloe, Washington.....	1896-1902
Thomas E. Anderson, Sec., Statesville.....	1896-1902
Albert Anderson, Wilson <sup>8</sup> .....	1898-1902
Edward C. Register, Charlotte <sup>8</sup> .....	1898-1902
Thomas S. McMullan, Hertford <sup>8</sup> .....	1900-1902
John C. Walton <sup>8</sup> .....	1900-1902

## EIGHTH BOARD

A. A. Kent, Lenoir.....	1902-1908
Charles O'H. Laughinghouse, Greenville.....	1902-1908
M. H. Fletcher, Asheville.....	1902-1908
James M. Parrott, Kinston.....	1902-1908
J. T. J. Battle, Greensboro.....	1902-1908
Frank H. Russell, Wilmington.....	1902-1908
George W. Pressly, Secretary, Charlotte <sup>1</sup> .....	1902-1906
G. T. Sikes, Secretary, Grissom <sup>9</sup> .....	1906-1908

## NINTH BOARD

Lewis B. McBrayer, Asheville.....	1908-1914
John C. Rodman, Washington.....	1908-1914
William W. McKenzie, Salisbury.....	1908-1914
Henry H. Dodson, Greensboro.....	1908-1914
John Bynum, Winston-Salem.....	1908-1914
J. L. Nicholson, Richlands.....	1908-1914
Benj. K. Hays, Secretary, Oxford.....	1908-1914

## TENTH BOARD

Isaac M. Taylor, Morganton.....	1914-1920
John Q. Myers, Charlotte.....	1914-1920
Jacob F. Highsmith, Fayetteville.....	1914-1920
Martin L. Stevens, Asheville.....	1914-1920
Charles T. Harper, Wilmington <sup>4</sup> .....	1914-1915
Edwin G. Moore, Elm City <sup>10</sup> .....	1915-1920
John G. Blount, Washington <sup>11</sup> .....	1914-1920
Hubert A. Royster, Secretary, Raleigh.....	1914-1920

## ELEVENTH BOARD

Lester A. Crowell, Lincolnton.....	1920-1926
William P. Holt, Duke.....	1920-1926
J. Gerald Murphy, Wilmington.....	1920-1926
Lucius N. Glenn, Gastonia.....	1920-1926
Clarence A. Shore, Raleigh.....	1920-1926
William M. Jones, Greensboro.....	1920-1926
Kemp P. B. Bonner, Sec., Morehead City.....	1920-1926

## TWELFTH BOARD

Paul H. Ringer, Asheville.....	1926-1932
W. Houston Moore, Wilmington.....	1926-1932
T. W. M. Long, Roanoke Rapids.....	1926-1932
W. W. Dawson, Grifton <sup>4</sup> .....	1926-1930
J. K. Pepper, Winston-Salem.....	1926-1932
Foy Roberson, Durham.....	1926-1932
John W. McConnell, Secretary, Davidson.....	1926-1932
David T. Tayloe, Jr., Washington <sup>12</sup> .....	1930-1932

## THIRTEENTH BOARD

Ben F. Royal, Morehead City.....	1932-1938
Benj. J. Lawrence, Secretary, Raleigh.....	1932-1938
F. Webb Griffith, Asheville.....	1932-1938
Hamilton W. McKay, Charlotte.....	1932-1938
J. W. Vernon, Morganton.....	1932-1938
W. H. Smith, Goldsboro.....	1932-1938
K. G. Averitt, Cedar Creek <sup>4</sup> .....	1932-1936
Roscoe D. McMillan, Red Springs <sup>13</sup> .....	1936-1938

## FOURTEENTH BOARD

Karl B. Pace, Greenville.....	1938-1944
William M. Coppridge, Durham.....	1938-1944
Frank A. Sharpe, Greensboro.....	1938-1944
Lewis W. Elias, Asheville <sup>4</sup> .....	1938-1943
J. Street Brewer, Roseboro.....	1938-1944
W. D. James, Secretary, Hamlet.....	1938-1944
L. A. Crowell, Jr., Lincolnton.....	1938-1944
John LaBruce Ward, Asheville <sup>14</sup> .....	1943-1944

## FIFTEENTH BOARD

C. W. Armstrong, Salisbury.....	1944-1950
M. D. Bonner, Jamestown.....	1944-1950
T. Leslie Lee, Kinston.....	1944-1950
Roy B. McKnight, Charlotte.....	1944-1950
Paul G. Parker, Erwin.....	1944-1950
M. A. Pittman, Wilson.....	1944-1950
Ivan M. Procter, Secretary, Raleigh.....	1944-1950
James B. Bullitt, Chapel Hill <sup>15</sup> .....	1949-1950

## SIXTEENTH BOARD

James P. Rousseau, Winston-Salem.....	1950-1956
Newsom P. Battle, Rocky Mount.....	1950-1956
Clyde R. Hedrick, Lenoir.....	1950-1956
Heyward C. Thompson, Shelby.....	1950-1956
L. Randolph Doffermire, Dunn.....	1950-1956
Amos N. Johnson, Garland.....	1950-1956
Joseph J. Combs, Raleigh.....	1950-1956

<sup>1</sup> Resigned before expiration of term.<sup>2</sup> Elected for unexpired term of Dr. Hicks.<sup>3</sup> In 1890 the Medical Society of the State of North Carolina adopted the plan of electing members of the Board in such a manner that the terms would expire at different intervals of two years. This practice was followed for twelve years, or until 1902, when the plan was abandoned; an equivalent of two terms of six years each. It is evident that the Society arranged to abandon the policy as early as 1898, as two members were elected for short terms, and two years later two other members were elected for still shorter terms. It is therefore impossible to separate the sixth and seventh Boards, since the membership was overlapping.<sup>4</sup> Died before the expiration of his term.<sup>5</sup> Elected to serve unexpired term of Dr. Hays.<sup>6</sup> Elected to serve the unexpired term of Dr. Burbank.<sup>7</sup> Elected to serve the unexpired term of Dr. Whitehead.<sup>8</sup> Elected for short term expiring in 1902.<sup>9</sup> Elected to serve the unexpired term of Dr. Pressly.<sup>10</sup> Elected to serve the unexpired term of Dr. Harper.<sup>11</sup> Died a few months before the expiration of his term; such a short time that the vacancy was not filled.<sup>12</sup> Elected to serve unexpired term of Dr. W. W. Dawson.<sup>13</sup> Elected to serve unexpired term of Dr. Averitt.<sup>14</sup> Elected to serve unexpired term of Dr. Elias.<sup>15</sup> Elected to serve unexpired term of Dr. T. Leslie Lee.



## MOORE COUNTY MEDICAL SOCIETY MEDAL

In 1927 the Moore County Medical Society established a fund, the interest from which is used to pay for a medal to be given for the best paper read at the State Society meeting each year. No one is eligible to receive this medal except Fellows of the Medical Society of the State of North Carolina in good standing; no invited guest is allowed to compete.

Each Section Chairman selects a committee of three to decide on the best paper written in their section. The winning papers are then turned over to the State Committee, who select the one to receive the medal. The following Fellows have been awarded this medal:

- 1928—Paul Pressly McCain, M.D.....Sanatorium  
"The Diagnosis and Significance of Juvenile Tuberculosis"  
(From Section on Pediatrics)
- 1929—A. B. Holmes, M.D.....Fairmont  
"The Treatment of Uremia"  
(From Section on Chemistry, Materia Medica and Therapeutics)
- 1930—C. T. Smith, M.D., and W. Bernard Kinlaw, M.D.....Rocky Mount  
"The Clinical Consideration of Anaemia of Pregnancy and of Puerperium"  
(From Section on Practice of Medicine)
- 1931—F. C. Smith, M.D.....Charlotte  
"Practical Value of Perimetry in Intracranial Conditions; Case Reports" (tumors, vascular disease, toxemia, syphilis and trauma)  
(From Section on Eye, Ear, Nose and Throat)
- 1932—Charles I. Allen, M.D.....Wadesboro  
"An Improved Splint for Treating Fractures of the Lower Extremity Showing Reduction and Skeletal Distraction Attachments"  
(From Section on Surgery)
- 1933—H. L. Sloan, M.D.....Charlotte  
"Some General Remarks about Cataract Surgery, With Report of 100 Consecutive Uncomplicated Cataract Operations"  
(From Section on Ophthalmology and Otolaryngology)
- J. R. Adams, M.D.....Charlotte  
"Hypo-glycaemia in Children"  
(From Section on Pediatrics)
- 1934—Fred E. Motley, M.D.....Charlotte  
"Complications of Mastoiditis with Special Reference to Septicemia"  
(From Section on Ophthalmology and Otolaryngology)
- 1935—Arthur H. London, M.D.....Durham  
"The Composition of an Average Pediatrics Practice"  
(From Section on Pediatrics)
- 1936—V. K. Hart, M.D.....Charlotte  
"Etiological and Therapeutic Aspects of Bronchiectasis with Clinical Observations on Bronchial Lavage by the Stitt Method"  
(From Section on Ophthalmology and Otolaryngology)
- 1937—No award made.
- 1938—O. Hunter Jones, M.D.....Charlotte  
"Pelvic Architecture and Classification with its Practical Application"  
(From Section on Gynecology and Obstetrics)
- 1939—Donnell B. Cobb, M.D.....Goldsboro  
"Vaginal Ureterolithotomy"  
(From Section on Surgery)
- 1940—C. R. Monroe, M.D., C. D. Thomas, M.D., and C. L. Gray, M.D.....Pinehurst  
"Thoracoplasty and Apicolysis"  
(From Section on Surgery)
- 1941—Walter R. Johnson, M.D.....Asheville  
"Is Diverticulitis of the Colon a Surgical Disease?"  
(From Section on Practice of Medicine)
- 1942—E. P. Alyea, M.D.....Durham  
"Castration for Carcinoma of the Prostate Gland"  
(From Section on Surgery)
- 1943—No award made.
- 1944—D. F. Milam, M.D.....Chapel Hill  
"Vitamin C Content of Some North Carolina Cooked Foods"  
(From Section on Public Health and Education)
- 1945—No Meeting.
- 1946—E. C. Hamblen, MD.....Durham  
"Some Aspects of Sex Endocrinology in General Practice"  
(From Section on General Practice of Medicine and Surgery)
- 1947—W. L. Thomas, M.D.....Durham  
"Some psychosomatic Problems in Gynecology"  
(From Section on Gynecology and Obstetrics)
- 1948—Felda Hightower, M.D.....Winston-Salem  
"The Control of Electrolyte and Water Balance in Surgical Patients"  
(From Section on Surgery)
- 1949—George J. Baylin, M.D.....Durham  
"The Roentgen Aspect of Non-Opaque Pulmonary Foreign Bodies"  
(From Section on Radiology)
- 1950—Parker R. Beamer, M.D.....Winston-Salem  
"Studies on Experimental Leptospirosis"  
(From Section on Pathology)

## THE GEORGE MARION COOPER AWARD

By authority of the House of Delegates the memorial award established by the Wake County Medical Society in tribute to George Marion Cooper, M.D., late Assistant State Health Officer, will be awarded to the best paper presented annually at the Annual Session of the State Society. Competition will be restricted to those papers on the subjects of public health, preventive medicine or maternal and child health. Program Chairmen of the ten scientific sections should take note of this in the preparation of the 1952 program and in the judging of papers presented at the Annual Session in 1952.

## EXECUTIVE COMMITTEE MEETINGS

### SUNDAY MORNING SESSION

May 6, 1951

The Executive Committee of the Medical Society of the State of North Carolina met in the Small Card Room of the Hotel Carolina, Pinehurst, at eleven-fifteen o'clock, Dr. Roscoe D. McMillan, president of the Society, presiding.

**President McMillan:** The meeting of the Executive Committee will please come to order.

The following were present:

#### Officers:

Dr. Roscoe D. McMillan, President  
Dr. Fred C. Hubbard, President-elect  
Dr. Joseph A. Elliott, First Vice President  
Dr. Millard D. Hill, Secretary-Treasurer  
Mr. James T. Barnes, Executive Secretary

#### Councilors:

Dr. Bahnson Weathers  
Dr. Arthur H. London, Jr.  
Dr. William A. Sams  
Dr. Alban Papineau  
Dr. Hugh A. McAllister  
Dr. Lester A. Crowell, Jr.  
Dr. James H. McNeill  
Dr. Irving E. Shafer

#### Guests: (nonvoting)

Dr. J. W. Roy Norton, State Health Officer  
Mr. F. Ross Porter, President, North Carolina Hospital Association  
Mr. LeRoy H. Cox, Public Relations Officer, MSSNC

Mr. John Anderson, Attorney

**President McMillan:** We have a quorum present and will proceed with the order of business.

**Dr. Elliott:** I move that we dispense with the reading of the minutes, inasmuch as we have had a copy of them.

[The motion was seconded by Dr. London.]

**President McMillan:** All in favor say, "aye;" opposed, "no." The minutes are approved.

The next item is to consider summary report of the Executive Committee to the House of Delegates on meetings and actions of the year. This includes the Finance Committee's report on and adoption of the 1951 budget.

**Mr. James T. Barnes:** This summary simply states the salient motions in the three meetings of the Executive Committee, September 17, November 26 and March 11. They were excerpted from the official transcripts of the minutes of those meetings and this is designed as your report to the House of Delegates.

[Mr. Barnes read the summary of the Executive Committee.]

**Dr. London:** Mr. President, I would like to ask you to clarify the question on students and affiliate members with regard to dues. What were the dues of affiliate members?

**Mr. Barnes:** The dues of affiliate members as set forth in the revision of the Constitution, if adopted at the final reading by this House of Delegates, will be half of the annual dues established for the Society; provided their salary is not over \$4,800 a year.

**Dr. London:** What was included in student members?

**Mr. Barnes:** That was to include men who had not been licensed, who were in training status in the medical schools and not yet licensed. They would be accepted in a special category of student members at \$3 a year.

Students are those in a preintern status.

**Dr. Sams:** I move you, sir, that we insert "or unlicensed," so that it will read, "licensed or unlicensed."

[The motion was seconded by Dr. Elliott.]

**Dr. McMillan:**

It reads: "Any person who is regularly enrolled as a student and candidate for the degree of doctor of medicine in an approved medical school in the State of North Carolina, after he has finished the first two years of medical education, shall be eligible to apply for student membership; also, physicians licensed or unlicensed to practice medicine in North Carolina who are serving as interns or residents in hospitals in North Carolina for the purpose of extending their education and not primarily for remuneration, may become student members of the Society."

**President McMillan:** All in favor of the motion let it be known by saying "aye"; opposed, "no." The motion is carried.

**President McMillan:** Gentlemen, we are on the report of the Executive Committee.

**Dr. Shafer:** I move the report stand approved as read.

**Dr. Sams:** I second the motion.

**President McMillan:** All in favor of the motion let it be known by saying "aye"; opposed, "no." So ordered.

Next is the report of the Heart Disease Section, Personal Health Service, North Carolina State Board of Health, as required by previous action of the Executive Committee.

**Mr. Barnes:** As you recall, in adopting the plan which the State Board of Health presented on its preliminary Heart Disease Program, the Executive Committee made it a stipulation that the responsible division would report at the end of the year, and this is the report by Dr. A. H. Elliott of the Division on Personal Health Service submitted recently.

"For the immediate future, at least, this program will consist chiefly in the expansion of educational facilities for public health workers, medical students, and probably practitioners interested in scholarships in postgraduate heart work.

"The salary of an instructor is being paid for the conduct of a heart disease program in the School of Public Health, University of North Carolina, Chapel Hill.

"A series of weekly courses on heart disease and other subjects is given in the summer at the School of Public Health of the University of North Carolina.

"Equipment has been purchased for aid in the expansion of clinics already in operation at Duke and Watts Hospitals, Durham, and Charlotte Memorial and Mercy Hospitals, Charlotte, in addition to the City Health Department in Charlotte, for a clinic to be established at a later date. A limited number of personnel has been promised to work in these clinics and an electrocardiographic technician has already been employed in the Duke clinic.

"The salary of a statistician is being paid for studies in mortality statistics."

**Dr. London:** I move it be accepted.

[The motion was seconded by Dr. Shafer, put to a vote and carried.]

**President McMillan:** Gentlemen, we come to the proposal of the Old North State Medical Society of Negro physicians to become affiliated in some manner with the Medical Society of the State of North Carolina.

I ask our constitutional secretary, Dr. Hill, to read you what the Negro physicians have asked.

\*On and after May 7, 1951, this body will be known as the Executive Council, Medical Society of the State of North Carolina.



April 25, 1951

Dr. Millard D. Hill, Secretary-Treasurer  
North Carolina Medical Society  
203 Capital Building  
Raleigh, N. C.  
Dear Dr. Hill:

This is a proposal from the Old North State Medical Society (Negro).

The Old North State Medical Society, in consideration of the advantages and benefits to be accrued to its membership and to potential qualified licensed Negro physicians of North Carolina as members of the American Medical Association, respectfully request the officials and the House of Delegates of the Medical Society of North Carolina to authorize its delegates to the American Medical Association to seek the admission of said Old North State Medical Society as a constituent Association of the American Medical Association with all rights and privileges accruing to its members.

Sincerely yours,  
/s/ CLYDE DONNELL, M.D.  
Secretary-Treasurer

April 25, 1951

Dr. Millard D. Hill, Secretary-Treasurer  
North Carolina Medical Society  
203 Capital Building  
Raleigh, N. C.  
Dear Dr. Hill:

Should the proposal to the American Medical Association to consider the Old North State Medical Society as a constituent Association of the American Medical Association be denied; that the Medical Society of the State of North Carolina move to change its Constitution, lifting the racial barrier to Negro physicians. In addition, that the Medical Society of the State of North Carolina pass a resolution requesting the various county societies to consider for membership qualified Negro physicians in their counties.

Sincerely yours,  
/s/ CLYDE DONNELL, M.D.  
Secretary-Treasurer

The Old North State Medical Society, which is composed of Negro physicians residing and practicing medicine in North Carolina, wishes to submit the following proposals to the Medical Society of the State of North Carolina:

"(1) That the Medical Society of the State of North Carolina admit to its membership any member in good standing of the Old North State Medical Society who is able to meet the professional and ethical requirements of the Medical Society of the State of North Carolina.

"(2) That the various county medical societies of the State of North Carolina admit to their membership any member in good standing of the Old North State Medical Society who is able to meet the professional and ethical requirements of these societies.

"(3) That the qualifications of the Negro physicians through the Medical Society of the State of North Carolina and the county medical societies receive the same consideration and process as the application of white physicians in the Society.

"Respectfully submitted,  
Special Committee

"T. L. DELANEY, Raleigh  
"E. E. BLACKMAN, Charlotte  
"MAURY P. DAVIS, Chairman"

**President McMillan:** Gentlemen, "It is my recommendation that this Society consider the adjustment of its By-Laws looking toward a chartering of an organization of Negro physicians in the state. The members of the chartered organization will be all Negro physicians who are qualified for membership in the Medical Society of the State of

North Carolina. The charter grant would be subject to the House of Delegates of the Medical Society of the State of North Carolina. Negro members of our profession deserve our recognition and cooperation." My recommendation is made after much thought and study of plans in other states. Already I have named a committee to consult with the American Medical Association on possible ways by which an organization of Negro physicians may affiliate with that body.

**Dr. Elliott:** I move that this council adopt the recommendation of President McMillan subject to any recommendation for clarification which the visiting Secretary of the American Medical Association may make to the House of Delegates of this Society.

**Dr. Sams:** I second that motion.

**President McMillan:** All in favor let it be known by saying, "aye"; opposed, "no." That is carried.

**President McMillan:** We come now to consider membership criteria in relation to license for one employed in hospital administration to alleged exclusion.

**Mr. Barnes:** I understand that in the organization of the Cone Memorial Hospital in Greensboro, they have employed a physician who is to serve as administrator of that institution. He does not propose, nor does the Board of Trustees propose, that he will do any element of medical practice. He comes to the state, of course, with a license in another state but he has not secured a license in North Carolina, and it is a matter of preference with him and with the Board that he not secure a license to practice medicine in North Carolina.

On the other hand, he desires membership in the Medical Society of the State of North Carolina, which is not allowable under the Constitution unless he is licensed to practice medicine in North Carolina. They want the Constitution and By-Laws changed to make an exception for that sort of person.

**Dr. Sams:** I move you, Mr. President, that we reject the request.

**Dr. McNeill:** I second Dr. Sam's motion.

**President McMillan:** All in favor say, "aye"; opposed, "no." So ordered.

The next item is the expiring term on the North Carolina Medical Care Commission.

**Dr. London:** I move Dr. W. M. Coppridge be recommended to the House of Delegates for appointment to the Medical Care Commission.

[The motion was seconded by Dr. Sams.]

**President McMillan:** Those in favor of recommending Dr. Coppridge signify by saying, "aye"; oppose, "no." Carried.

Gentlemen, the next matter is a statement of North Carolina Academy of Preventive Medicine.

**Mr. Barnes:** This statement comes from Dr. R. E. Coker, secretary-treasurer, of the North Carolina Academy of Preventive Medicine and Public Health, the purpose of which is to encourage the study, improve the practice and advance the cause of preventive medicine and public health. The objectives are:

"(1) To study, discuss and initiate measures which will enhance the prestige and attraction of the specialty of preventive medicine and public health as a medical career.

"(2) To further the recruitment of able medical graduates and young physicians into the specialty.

"(3) To promote and encourage the continuing education of its members and of other physicians in preventive medicine and public health.

"(4) To study, discuss, and make recommendations relating to research, practice, and policy in preventive medicine and public health.

"Membership: Invitation to membership shall be extended to each diplomate of the American Board of Preventive Medicine and Public Health resident

in North Carolina. A diplomate shall become a member upon signifying his acceptance and paying such dues or assessments as may be currently in effect.

"Officers: The officers of the Academy shall consist of a president, a president-elect, and secretary-treasurer. The Executive Committee shall consist of these officers together with two other members to be elected by the membership of the Academy."

Then they list twenty-two charter members of the organization. Dr. Coker says, "I take pleasure in announcing our organization to you as president of the State Medical Society, and wish to assure you of our readiness to be of service to you and to the State Society in any matter pertaining to this specialty of medicine."

Dr. Sams: I move that it be accepted as a matter of information.

[The motion was seconded by Dr. McNeill, put to a vote and carried.]

**President McMillan:** We have Dr. Forbus with us who will present a supplementary report for the Committee on the Coroner System.

**Dr. W. D. Forbus:** You will recall that this committee was continued as of last year and was instructed to proceed to develop further the plan for a modification of the coroners' law which would, in effect, establish within the state a form of medical examiners system.

Your committee was also instructed to confer with the Committee on Legislation of the Society and, working in collaboration with that committee, and with the president of the Society and other interested members of the Society, to proceed to bring to the attention of the Legislature a bill which would deal with the matter, a preliminary statement of which was filed with the Association. Since that time, those instructions have been carried out. Your committee first met with the Committee on Legislation just preceding the legislative session. It was decided at that time that we would proceed to get the bill which had already been presented in preliminary form in the Legislature.

We did that. We were delayed almost six weeks in getting this matter before the Legislature by what proved to be a misjudgment on the part of our committee. We had had indications that the Judicial Council, which is, as I understand it, somewhat of an agent of the Legislature, would probably sponsor this bill. It turned out that they did not choose to undertake it and that went by the board. That was a decision by default; it was a matter of no decision, as a matter of fact, rather than a decision against. The matter simply never was brought to the attention of the Judicial Council in an official meeting.

At that stage of the development of our business, Mr. Barnes learned of the interest of one of the coroners in the state, Mr. Creech, of Smithfield, in having something done toward helping the coroner in the administration of the coroners' law. We seized upon that opportunity and went to Mr. Creech and, after a series of negotiations with him and with his associates, a Representative from Kinston, we succeeded in getting the bill introduced in the Legislature but under the auspices or the sponsorship of the coroners, which we thought was a wise thing.

The bill was introduced by the representatives from Johnston County, Mr. Page and the others—there are three of them.

The bill was referred to Judiciary Committee No. 2. That committee had a hearing at which your own committee appeared and the matter was presented by one of the committee. We had what we thought was a very favorable hearing. As a matter

of fact, as far as I have been able to learn, no opposition developed to this bill, that is, certainly no outspoken opposition developed to the bill. There was no opposition testimony at the hearing of the main committee. We heard not only from our own committee but we heard Dr. Norton, we heard Mr. Creech, the coroner's representative, and we also heard the secretary of the county boards of commissioners, Mr. Vaughn. All of those people were in favor of the bill and there was no opposition.

The bill was referred to a subcommittee of which Mr. Parrott of Kinston was chairman. The bill was worked over and a substitute bill was presented to the whole committee. Your own committee worked along with Mr. Parrott and his committee in the reformulation of the bill and the substitute bill that was finally brought to the committee was not essentially different from the bill which we had proposed.

By the time that this had been accomplished, the Legislature was virtually on the point of adjournment and so it is my understanding from Mr. Parrott and others that that was really the only reason why the bill was not reported favorably by the committee. We have every reason to believe, as far as my information goes, that this bill will be received favorably at the next session of the Legislature, and for that reason your committee is suggesting that you continue your committee and that you facilitate a further study over the next two years and that the bill be brought to the Legislature immediately on its opening at the proper time.

**Dr. London:** Mr. Chairman, I move the report be adopted.

[The motion was seconded by Dr. Elliott.]

**President McMillan:** All in favor say, "aye"; opposed, "no." So ordered.

**President McMillan:** We will pass on to the report of the North Carolina Board of Medical Examiners.

**Mr. Barnes:** I have here, conveyed by Dr. J. J. Combs, secretary of the North Carolina Board of Medical Examiners, a ten-page audit report signed by John F. Prescott, certified public accountant, a company in Raleigh, North Carolina.

**Dr. McNeill:** I move that the report be accepted.

[The motion was seconded by Dr. Weathers, put to a vote and carried.]

## AUDIT REPORT BOARD OF MEDICAL EXAMINERS OF THE STATE OF NORTH CAROLINA

### Board Members and Officers—1950

**M. D. Bonner, M.D.**

President

**Ivan M. Procter, M.D.**

Secretary-Treasurer

**Charles W. Armstrong, M.D.**

**M. D. Bonner, M.D.**

**James B. Bullitt, M.D.**

**R. B. McKnight, M.D.**

**Paul G. Parker, M.D.**

**Malory A. Pittman, M.D.**

**Ivan M. Procter, M.D.**

### NOTE:

Dr. Paul F. Whitaker was elected a member of the Board to fill the unexpired term of Dr. Paul G. Parker who died September 19, 1950.

### Audit Report of the North Carolina Board of Medical Examiners

November 28, 1950

To The Board of Medical Examiners  
of the State of North Carolina  
Raleigh, North Carolina

As requested, we have examined the books and



records of the Board of Medical Examiners of the State of North Carolina for the eleven months ended October 31, 1950, and submit herewith our report together with the following exhibits:

**Exhibit**

Statement of Cash Receipts and Disbursements .....	"A"
Balance Sheet as at October 31, 1950 .....	"B"
Statement of Income and Expenses for the eleven months ended October 31, 1950 .....	"C"
Statement of Furniture and Fixtures at October 31, 1950 .....	"D"

**Financial Condition**

A summary of Cash Receipts and Disbursements for the eleven months ended October 31, 1950, is presented in Exhibit "A". All recorded receipts were deposited in Wachovia Bank & Trust Company, Raleigh, North Carolina. All disbursements were made by checks, which were examined for proper signatures, endorsements, etc. Invoices and other data supporting disbursements were also examined.

The financial condition of the Board at October 31, 1950, is shown in Exhibit "B." Comments on the more important items in the Balance Sheet follow.

**Cash in Banks—\$3,125.13**

Cash on deposit with Wachovia Bank and Trust Company, Raleigh, North Carolina, in the amount of \$625.13, and with Security National Bank, Raleigh, North Carolina, in the amount of \$2,500.00, was satisfactorily reconciled with the balances shown on the bank statements at October 31, 1950, which balances were confirmed by direct communication with the banks.

**Furniture and Fixtures—\$874.00**

A detailed statement of furniture and fixtures is shown in Exhibit "D." Additions during the year consisted of a 4-drawer steel filing cabinet, a chair, and a typewriter table, all used. No recognition has been given to depreciation on furniture and fixtures due to the comparatively small amount involved and due to the nature of the Board. Any loss sustained in the disposition of the property will be reflected at the time of such disposition.

**Unearned Fees—\$362.50**

This item represented fees received from applicants for licenses as follows:

- (a) by reciprocity, whose credentials had not been satisfactorily completed or who had failed to appear at Board meetings prior to October 31, 1950:

Applicant	Date Received	Amount
D. G. Dickerson	4-27-48	\$ 50.00
F. A. Smith	6-8-48	50.00
R. B. Bost	7-19-50	15.00
B. F. Timmons	8-10-50	15.00

Total .....\$130.00

- (b) by reciprocity, whose credentials were received subsequent to the September meeting of the Board:

Applicant	Date Received	Amount
W. D. Meyers	9-28-50	50.00
R. L. Burt	9-28-50	50.00
B. M. Bloor	10-17-50	15.00
H. D. Tripp	10-27-50	50.00

Total .....\$165.00

- (c) by examination, who were unable to take the examination in June, 1950, and have requested that the fees be held until the June, 1951 examination:

Applicant	Date Received	Amount
L. H. Downs	6-8-49	\$ 15.00
J. L. Cochran, Jr.	5-19-50	7.50
J. H. Seltsam	5-29-50	15.00
J. T. Dees	6-1-50	7.50
S. R. Martin	6-6-50	7.50
G. M. Bullard	6-6-50	15.00

Total .....\$ 67.50

**Net Worth—\$3,510.86**

The decrease in net worth for the eleven months ended October 31, 1950, is accounted for as follows:

Net Worth November 30, 1949 .....	\$4,894.01
Deduct Net Loss for the Eleven Months Ended October 31, 1950 .....	1,383.15
Net Worth—October 31, 1950 .....	\$3,510.86

**Results of Operations**

Exhibit "C" shows in summary form the results of operations for the eleven months ended October 31, 1950, reflecting a net loss of \$1,383.15, as compared with a net loss of \$2,550.31 for the fiscal year ended November 30, 1949. The decrease of \$1,167.16 in the loss for the eleven months ended October 31, 1950, as compared with the twelve months ended November 30, 1949, is accounted for principally by the following items:

Increase in fees .....	\$1,547.50
Decrease in compensation of officers .....	810.00
Decrease in salaries .....	200.00
Decrease in legislative expenses .....	894.08
Decrease in other expenses .....	339.36
	\$3,790.94

**Less:**

Increase in meeting expenses .....	\$ 884.76
Increase in rent of office .....	200.00
Increase in printing, stationery and office supplies .....	261.02
Increase in licenses and expense of completing .....	154.50
Increase in Special Committee Expense .....	1,000.00
Increase in Other expenses .....	123.50
	2,623.78

Net Decrease in Loss .....\$1,167.16

At its meeting held September 24-25, 1950, the Board voted that the sum of \$1,000.00 be appropriated for the purpose of writing a history of the North Carolina State Board of Medical Examiners expounding the policies and activities of the present Board, and that Dr. Ivan Procter serve as Chairman of the committee so created. In accordance therewith, \$1,000.00 was paid over to the Chairman on October 25, 1950. We have made no verification of the activities of the committee in connection with this appropriation.

**General**

The assets and liabilities shown in Exhibit "B" and the items of income and expense shown in Exhibit "C" have been verified to the extent indicated in the comments set forth in this report. Our examination did not extend beyond the office records as to verification of cash receipts.

Fidelity bonds on Dr. Ivan M. Procter and Mrs. Louise J. McNeill, each in the amount of \$2,000.00, were in force and were examined. Insurance policies in the amount of \$400.00 on the audograph machine and \$500.00 on other office equipment and supplies were also in force at October 31, 1950, and were examined.

Respectfully submitted,

JOHN F. PRESCOTT COMPANY

(Signed) John F. Prescott

Certified Public Accountant

EXHIBIT "A"  
Board of Medical Examiners of the State  
of North Carolina  
Statement of Cash Receipts and Disbursements  
Eleven Months Ended October 31, 1950

## Receipts:

Fees from Reciprocity Certificates—		
From Other States to North Carolina .....	\$7,745.00	
From North Carolina to Other States .....	790.00	\$ 8,535.00
Fees from Examinations—		
Parts I and II .....	\$ 495.00	
Part I (by reciprocity) .....	30.00	
Part I only .....	802.50	
Part II only .....	480.00	1,807.50
Fees for Issuance of Duplicate Licenses.....		20.00
Fees for Sample Examination Questions.....		5.00
Refund of Key Deposit .....		1.00
Refund of Meeting Expenses—		
Per Diem Fees to Members .....	\$ 20.00	
Other Expenses .....	13.20	33.20
Total Receipts .....		\$10,401.70

## Disbursements:

Reciprocity Fees Returned—		
From Other States to North Carolina—		
License Refused (less 10%) .....	\$ 45.00	
License Surrendered (less 10%) .....	45.00	
Excess Deposits—Limited Licenses .....	175.00	
Excess Deposits—Licensed by Exam. ....	35.00	\$ 300.00
Examination Fees Returned—		
Parts I and II .....		37.50
Deposit on Office Key .....		1.00
Purchase of Office Furniture .....		85.00
Accounts Payable at 11-30-49 .....		37.74
Collector of Internal Revenue for Income Taxes		
Withheld on Salaries .....		262.80
Compensation of Officers .....		520.00
Salaries .....	\$2,200.00	
Less Income Taxes Withheld .....	245.50	1,954.50
Board Meeting Expenses—		
Per Diem Fees to Members .....	\$ 870.00	
Hotel Expenses .....	1,998.06	
Travel and Other Expenses .....	1,950.27	4,818.33
Rent of Offices .....		800.00
Telephone and Telegraph .....		285.52
Printing, Stationery, and Supplies .....		633.30
Postage .....		200.00
Repairs and Maintenance—Office Machines .....		20.30
Legal Expenses—		
Notary Fees .....	\$ 5.00	
Subpoena and Summons Fees .....	3.00	
Certified copy of Judgment .....	.40	8.40
Accounting Services .....		175.00
Insurance and Bond Premiums .....		20.00
Certificates (Licenses) and Expense of		
Completion .....		175.50
Examination Expense—		
Multilithing Questions .....	\$ 42.50	
Preparing and Grading Examination .....	385.00	\$ 427.50
Dues and Subscriptions .....		126.50
Bank Service Charges .....		1.73
Flowers—Funeral .....		100.00
Copy Work .....		10.00
Special Committee for Writing History of Board.....		1,000.00

Total Disbursements ..... \$12,000.62

Excess of Disbursements Over Receipts ..... (\$ 1,598.92)

Bank Balances November 30, 1949 ..... 4,724.05

Bank Balances October 31, 1950 ..... \$ 3,125.13



Wachovia Bank and Trust Co.		Bank Reconciliations	
Balance per Bank Statement October 31, 1950.....		\$ 717.46	
Less Checks Outstanding:			
#1043 .....	\$ 49.00		
1061 .....	12.15		
1069 .....	6.00		
1070 .....	15.93		
1071 .....	9.25	92.33	
Balance per Books October 31, 1950.....			\$ 625.13
Security National Bank			
Balance per Bank Statement October 31, 1950.....		\$2,500.00	
Checks Outstanding .....		None	
Balance per Books October 31, 1950.....			2,500.00
Total Bank Balances .....			\$ 3,125.13

## EXHIBIT "B"

Board of Medical Examiners of the State of North Carolina  
Balance Sheet As At October 31, 1950

Cash in Banks:		Assets	
Wachovia Bank and Trust Co., Raleigh, N. C. ....	\$ 625.13		
Security National Bank, Raleigh, N. C. ....	2,500.00	\$ 3,125.13	
Furniture and Fixtures (Exhibit "D") .....		874.00	
Total Assets .....			\$ 3,999.13
		Liabilities and Net Worth	
Accounts Payable .....		\$ 9.27	
Income Taxes Withheld .....		26.50	
Refunds of Fees Due License Applicants (License declined or application withdrawn) .....		90.00	
Unearned Fees (Fees Received for License Applications Pending and for Examination) .....		362.50	
Net Worth:			
Balance Surplus November 30, 1949 .....	\$4,894.01		
Deduct:			
Loss for Eleven Months Ended October 31, 1950 (Exhibit "C") .....	1,383.15	3,510.86	
Total Liabilities and Net Worth .....			\$ 3,999.13

## EXHIBIT "C"

Board of Medical Examiners of the State of North Carolina  
Statement of Income and Expenses, Eleven Months Ended October 31, 1950

Income:			
Fees from Reciprocity Certificates (Net) .....		\$ 8,350.00	
Fees from Examinations (Net) .....		1,740.00	
Fees from Duplicate Licenses .....		20.00	
Fees from Sample Examination Questions .....		5.00	
Total Income .....			\$10,115.00
Expenses:			
Compensation to Officers—			
Dr. M. D. Bonner, President .....	\$ 520.00		
Salaries—			
Mrs. Louise J. McNeill, Ass't. ....	2,200.00		
Board Meeting Expenses .....	4,785.13		
Rent of Offices .....	800.00		
Telephone and Telegraph .....	285.52		
Printing, Stationery and Office Supplies .....	642.57		
Postage .....	200.00		
Repairs and Maintenance—Office Machines .....	20.30		
Legal Expenses .....	8.40		
Accounting Services (Auditing) .....	175.00		
Insurance and Bond Premiums .....	20.00		
Certificates and Completion .....	175.50		
Examination Expenses .....	427.50		
Dues and Subscriptions .....	126.50		
Bank Service Charges .....	1.73		
Miscellaneous .....	110.00		
Special Committee for Writing History of Board.....	1,000.00		
Total Expenses .....		11,498.15	
Net Income or (Loss) (Exhibit "B") .....			(\$ 1,383.15)

## EXHIBIT "D"

**Board of Medical Examiners of the State of North Carolina  
Statement of Furniture and Fixtures, October 31, 1950**

	Cost
1 Royal Typewriter .....	\$ 125.90
1 Typewriter Desk .....	103.57
1 4-Drawer Wood File Cabinet—Green Finish .....	53.90
1 Storage Cabinet .....	44.04
1 Secretary's Chair .....	28.07
4 Sets A-Z Pressboard Guides for File Cabinet .....	6.00
1 Master Audograph #10102 .....	326.27
1 Leather Carrying Case for Audograph (Used) .....	30.00
1 Steel File Cabinet—Green Finish .....	71.25
1 Steel File Cabinet—Green Finish (Used) .....	70.00
1 Chair (Used) .....	5.00
1 Typewriter Table (Used) .....	10.00
<b>Total .....</b>	<b>\$ 874.00</b>

**President McMillan:** The Insurance Committee meets in the Dutch Room at two o'clock and they will report tonight at nine-thirty. If there is no further business, we will recess until nine-thirty this evening.

[The meeting recessed at twelve-fifty o'clock.]

**SUNDAY EVENING SESSION**

**May 6, 1951**

The meeting reconvened at nine-thirty o'clock, Dr. Joseph A. Elliott, first vice president, presiding.

Dr. J. F. McGowan of Asheville, North Carolina, appeared before the Committee on the basis of a prior arranged appointment and as a delegate from the Buncombe County Medical Society. He referred briefly to legislative House Bill 520 which had created state-wide interest among physicians in the practice of Eye, Ear, Nose and Throat during the course of the 1951 General Assembly. He commended the effort of the executive secretary and the attorney of the Society and extended his apologies to President-Elect, Fred C. Hubbard, for a former expressed attitude in regard to the handling of legislation for the Society. He pointed out that there was no information sent up to the headquarters office from his county medical society and that there was little information on legislation available to the general membership of the Society regarding the problem of legislation until there was an emergency arising making it necessary that action be taken to combat certain pieces of legislation on an emergency basis. He explained that the Buncombe County Medical Society concluded that something should be done in the way of local effort to combat House Bill No. 520, when it was discovered that the House Committee of which their own Representative, Mr. Love, had been a member, reported favorably on the bill by a vote of six to five, described the action of the Public Relations Committee of the Buncombe County Medical Society (the committee of the society which deals with legislation), and stated the estimate that these actions had not been too effectual in meeting the professional need in public relations and in influencing legislation which arises at the state and national levels.

As an alternative to the situation as stated in this experience, Dr. McGowan offered an outline which he had developed out of his representation of the Buncombe County Medical Society, and tendered it to the Society as a means of developing a better state-wide effort in respect to the maintenance of public relations and in the influencing of legislation. Herein is set forth the outline excerpted from Dr. McGowan's notes as he presented the subject to the Council:

**Public Relations and Legislative Committee**

Consist of:

1. Representative of each specialty or
2. Members of each section of North Carolina Medical Society, including general practice.
3. All councilors shall act as **ex-officio** members in the district they represent and act as liaison officers from their local district to the State Committee.

Duties and purpose:

1. To submit specific questions in writing—to interview prospective candidates for elective offices relative to their views on medical practice and public health.
2. To inform the medical profession by letter—mimeograph copy and the candidate's response to specific questions at least 30 days prior to primary and later, before general election.
3. To inform the press, radio, and civic group meetings regarding matters pertaining to health, and counsel editors or reporters on proper medical ethics, and encourage them to seek advice.
4. Establish Speakers Bureau in each county.
5. Give news releases and standing of unusual medical events occurring in your community of news interest.
  - a. Infrequent operation
  - b. General progress
  - c. Pictures
  - d. No names released
6.
  - a. Serve on committees of civic clubs and Chamber of Commerce.
  - b. Act as a leader even if you are not; the public expects and respects you and your cooperation and opinion.
  - c. Fund raising campaign: Give as a unit with your donation. It means more in a group than as an individual. Let medicine be recognized.
  - d. Recommend, encourage, and approve better government on a local, county, state, and national basis. You are looked upon as a leader. Go ahead, consult with your competitor and give a candid democratic opinion.
  - e. Establish a 24 hour emergency medical service plan in each county. They will not work perfectly, but try and correct difficulties later.

**Each district to follow pattern of county public relations and legislative committee, except:**

1. Chairman of each county public relations committee would be a member representing said county in the district.  
They should elect own chairman.  
District Councilors should attend meetings but not hold chairman's office.



2. That sufficient time be allowed, even at the expense of scientific papers, to properly discuss, openly, matters pertaining to public relations and legislation in their spring and fall meetings and report directly to the central office of Public Relations and Legislative Committee.

#### Local-level chairmen:

1. Divide membership and have telephone committee to advise impending action to notify representatives by personal interview, letter, telephone, telegraph.
2. Member in adjoining town call key man to notify other practitioners and interested groups.
3. Notify surrounding county societies to get busy.
4. Cooperate and inform allied professions.
5. Use Woman's Auxiliary.

To establish a liaison force on a state, district, and county level to cooperate with the allied professions and other interested groups in public health and welfare such as dental, pharmacy, veterinary medicine, nursing associations, public health, hospital association, medical auxiliary, etc., relative to legislation affecting any or all of these groups. That each profession keep an accurate active mailing list, including telephone numbers so that procedures, decisions, and directives can be immediately dispatched from the central office for advice or action.

"What affects one group"

"We all should cooperate"

"In unity we develop strength"

State Committee

District committee

County committee

Individual committee—

Friends

Patients

People

Clergy

Members of House of Representatives

Members of Senate

Members of House of Representatives Congress

Members of U. S. Senate

On influencing legislation and write why. Reasons for or against, give varied and definite views. To keep record of representatives and senators support or non-support of various bills of medical interest. Your license to practice medicine was delegated to you by the people of this state. Unless you can guard this sacred trust from all infringement, you may awaken to find you have lost this honor, this trust and their respect, to find the same authority given to groups of lesser qualification. Gentlemen, this is your challenge. Now what are you going to do?

#### State Committee

1. Should work with other forces such as civic clubs, P.T.A., Better Business Bureau, Chamber of Commerce, Women's Clubs and church organizations or other interested groups or individuals interested in public health and welfare.
2. Supply sufficient information to representatives and state leaders to support or defeat proposed legislation, either by letter, telegram, telephone, or best by personal interview.
3. Introduce new legislation (fight a fire by counter fire).
  - a. Basic Science Law.
  - b. Study and prosecute illegal infringement on the Medical Practice Act.
  - c. Obtain information and cooperate with the authorities on illegal infringement of medical practice and public health.

- d. Become more militant but never underestimate the strength of your enemy.
- e. Instruct President-Elect of district and county medical societies to appoint strong, active committee.

Respectively submitted,  
J. F. McGOWAN, M.D.,  
Asheville, N. C.

On motion duly made, seconded and carried, the Council adopted the report of Dr. McGowan and same was referred to the House of Delegates with the recommendation that each Section of the State Society select a consultant among the specialties represented in the Section to maintain a liaison with headquarters office of the State Society, the Legislative Committee of the State Society, the District Medical Societies and the public relations and/or legislative committees of the respective component county medical societies in the state looking toward developing the best advice on legislative subjects and interest for the information of the Society Legislative Committee in influencing legislation before the various committees and bodies of the North Carolina General Assembly and before the Committees and bodies of the United States Congress.

A statement of the organization and the guiding principles of the North Carolina Academy of Preventive Medicine (an organization of public health physicians) was presented to the Executive Committee and the statement was accepted as information.

An audit report made of the fiscal affairs of the North Carolina Board of Medical Examiners for the fiscal year 1950 by the firm of Prescott and Prescott of Raleigh, North Carolina, was presented to the Committee and on motion duly made and seconded, the report was accepted as information with instructions that it be printed in the **North Carolina Medical Journal** as a portion of the transactions.

The Executive Secretary presented letters emanating from the American Medical Association to members of the State Society under date of April 17, 1951, in reference to delinquency status by reason of non-payment of 1950 American Medical Association membership dues as of December 31, 1950. It was pointed out that this delayed letter had been promised by the American Medical Association in the early days of February of 1951 and its late appearance had resulted in some confusion. No action was necessary nor taken on the subject.

The compilation of annual reports of the councilors of the ten medical districts were considered and on motion duly made and seconded, these reports were adopted in toto inasmuch as the several councilors and members of the Executive Committee had had copies of the reports in advance and had read them.

The next action of the Committee was to consider the respective reports of Committees as set forth in the compilation of annual reports, page 1 to 72. There was considerable discussion of the report for the Committee on Grievances with reference to the rules and regulations which they recommended be adopted by the House of Delegates of the Medical Society of the State of North Carolina and to be published in the **North Carolina Medical Journal**. Dr. George F. Lull, Secretary of the American Medical Association, fitted into these discussions and pointed up the value of these committees at the various levels of professional medical organization as a vehicle for developing understanding between the patient, the doctor, and the public on matters which were misunderstood in the relationships of the three parties concerned.

Councilor, Lester A. Crowell, Jr., of the Seventh Medical District, raised the subject of the rules and

regulations promulgated by the State Department of Vocational Rehabilitation, then limiting services to certain types and certain capacity of medical institutions and the necessary restrictions which this brought about in the medical personnel that was used in the treatment of Vocational Rehabilitation cases. The subject was thoroughly discussed by members of the Committee and by Dr. George F. Lull.

On motion duly made and seconded, it was recommended that the incoming President designate a committee to study this question. The motion being put was unanimously carried.

In reference to the agenda of committee reports, the Committee considered these in the order in which they were set forth in the annual compilation of reports of committees and councilors. The following constitutes a running record of the transactions of the Committee:

The Committee on Archives of Medical Society History report, on motion duly made and seconded, was approved.

Report of the Public Relations Committee, on motion made and duly seconded and carried, was adopted.

The report of the Committee on Child Welfare, on motion made and duly seconded and carried, was adopted, with the suggestion that this committee study the provisions of the recommendations developed at the 1950 White House conference on the child.

The report of the Committee on Professional and Hospital Relations, on motion made and duly seconded and carried, was adopted.

The report of the Committee on Scientific Exhibits, on motion made and duly seconded and carried, was adopted.

The report of the Committee on Tuberculosis, on motion made and duly seconded and carried, was adopted.

The report of the Committee to Work with the North Carolina Industrial Commission, on motion duly seconded and carried, was adopted.

On motion made and duly seconded and carried, the report of the Committee on Industrial Health incorporating the recommendations of the Committee for the previous year was adopted.

The report of the Committee to Cooperate with the University of North Carolina on Selection of Medical School Faculty, on motion duly seconded and carried, was accepted.

The report of the Committee on Military Service, on motion duly made, seconded, and carried, was adopted.

The Committee on Medical Protection simply presented a statement that there was no report for that Committee to make of activities during the year.

The report of the Committee on Cancer was received along with addendum report, and on a motion duly seconded and carried, the report was adopted.

The report of Committee to Revise the Constitution and By-Laws, on motion duly seconded and carried, was adopted.

The report of the Committee to Study and Recommend Publication of an Average Schedule of Medical Fees was explained in the negative by Dr. G. W. Murphy, Chairman, and was, on motion duly made and seconded, accepted with recommendation that such Committee be continued for another year.

The report of the Committee on Rural Health and Education, on motion duly made and seconded and carried, was accepted.

The report of the Committee on Maternal Welfare, including its financial report, on motion duly made, seconded and carried, was adopted with the suggestion that Dr. A. H. Elliott succeed Dr. George

M. Cooper, deceased, as representative of the Maternal and Health Division of the State Board of Health in ex-officio capacity on this committee. The committee also recommended that the committee study the Maternal and Infancy Program of the North Carolina State Board of Health in connection with its further activities.

The report of the North Carolina Board of Medical Examiners for the period of November 1, 1950, to January 15, 1951, was read and, on motion duly seconded and carried, was accepted.

The report of the N. C. Board of Nurse Examiners, on motion made and duly seconded and carried, was accepted.

The report of the Committee on the Home Town Medical Care of Veterans, on motion duly made, seconded and carried, was adopted.

The report of the Physicians Committee on Nursing, on motion made, duly seconded and carried, was adopted.

The report of the Reference Committee on Credentials of Delegates to the House of Delegates was noted, the function of this Committee not having yet transpired.

The report of the expiring North Carolina Board of Medical Examiners for the year 1950 terminating November, 1950, was presented to the committee and, on motion made and duly seconded and carried, was adopted.

The report of the Committee on Fees in Industrial Cases, on motion made, duly seconded and carried, was adopted.

The report of the Committee on Postgraduate Medical Study, on motion made, duly seconded and carried, was adopted.

The report of the Committee on Emergency Medical Service, on motion made, duly seconded and carried, was adopted with acclaim and commendation.

The report of the Committee on Legislation, on motion duly made, seconded and carried, was adopted.

The report of the Committee on Mental Hygiene, on motion duly made, seconded and carried, was adopted.

The report of the Committee on Chronic Illness, on motion made, duly seconded and carried, was adopted.

The report of the Advisory Committee to the North Carolina Medical Care Commission was, on motion duly made, seconded and carried, adopted.

It was recommended that Dr. W. M. Coppridge be recommended for nomination in the General Session for a succession term on the North Carolina Medical Care Commission which position is to be nominated by the State Society to the Governor of the State of North Carolina for appointment. On motion duly made and seconded, this nomination was approved by the Executive Council.

The report of Physician Members of the North Carolina Care Commission, on motion duly made, seconded and carried, was adopted.

The report of the Auxiliary Advisory Committee, on motion duly made, seconded and carried, was adopted.

The report of the Delegates to the American Medical Association, reported for the first time in the annual compilation of reports, was accepted as information by the Committee.

The report of the Liaison Committee on Insurance to Work with the North Carolina Insurance Commissioner, on motion duly made, seconded and carried, was accepted.

The report of the Committee to Confer with the North Carolina State Board of Health and the Optometrists on School Health Program, on motion duly made, seconded and carried, was accepted as revised.



The report of the Committee to Collaborate with the North Carolina Optometric Society on the Removal of Sales Tax from Prescription Eye Glasses, on motion duly made, seconded and carried, was adopted.

The report of the Committee on Publications, on motion made, duly seconded and carried, was adopted.

The report of the Committee to Arrange Facilities for the Annual Session on motion made, duly seconded and carried, was accepted.

The report of the Committee on Scientific Work, on motion made, duly seconded and carried, was adopted.

The report of Fraternal Delegates to 1950 Annual Session Medical Society of Virginia, on motion made, duly seconded and carried, was adopted.

Following the consideration of the compilation of annual reports of committees, the meeting recessed to await the report of the Insurance Committee. The meeting was then called to order at eleven-fifteen o'clock by President McMillan.

**President McMillan:** I will call the meeting of the Executive Council to order after this recess. A quorum is present.

The next thing is the report of the Insurance Committee and its recommendations to the Executive Council are: That this Insurance Committee be given the power to charter the corporation if the committee deems it advisable and negotiate with insurance companies, or to dissolve this corporation and then turn over the functions of this organization to an insurance company with the proviso that a committee would have control of the fee schedule and payment of professional claims.

That we turn back to both Hospital Care and Hospital Saving approving the proposed solution of our disagreement with the Hospital Association, requesting that they jointly write a companion hospital certificate with appropriate co-insurance features to control the cost and resubmit it to the Insurance Committee for consideration and that in the event they cannot agree on additional companion certificate, for each to submit within 90 days their idea of a companion certificate and rates.

**Dr. Smith:** I believe they would understand it better if I read this proposed solution of the dispute, Roscoe.

This is an excerpt from the minutes of Hospital Saving which has it in detail and this has also been endorsed by Hospital Care.

"The Lay Committee submitted the following resolution for consideration by this Board. The April 10th letter of Dr. O. N. Smith on Plan of Operation of the Medical Society of the State of North Carolina was presented. After much discussion, it was hereby resolved to present the following alternative to the Medical Society of the State of North Carolina and to respectfully request its acceptance by them and the Hospital Association. It is believed this is the best and fairest solution to the anesthesia-pathology-physiotherapy-x-ray problem in North Carolina and at the present time, in so far as the presentation of these benefits through Blue Cross-Blue Shield prepayment plan is concerned, and involves no harm to either the physician or hospital and is consistent with the best interests of the public whom we all serve. It is understood that such changes as our experience will show to be advisable will be made from time to time in this agreement.

"Alternate suggestions: In the hospital part of the certificate, List 1, anesthesia fees when administered by a hospital employee.

"2. Pathology (See professional part of certificate, Section 5, Part II, §50.)

"3. X-ray examination, also see professional part,

same conditions and amounts as in Section 5, Part III-1.

"4. Irradiation therapy, also see professional part of certificate, same conditions and provisions as in Section 5, Part III-2.

"The above services of pathology and radiology consist of professional interpretation and the use of necessary facilities and supplies.

"The Association will settle claims by (1) payment to the physician; (2) payment to the hospital; or (3) divide payment between both in accordance with proper instructions, but there will be no duplication of payment.

"The Board unanimously voted that these resolutions are hereby accepted and adopted by this Board as an expression of the sentiment of this Board."

I communicated with Mr. Crawford because one part that was important to us was that, if we did not incorporate, we would insist on having control of the fee schedule and the payment of professional fees, and I have this communication from him on that point: "There is no question about Hospital Saving Association being perfectly willing and anxious for the Society to appoint a committee to perform such duties as outlined in Paragraph 2, page 3 of your committee report, and any other functions mutually agreed upon. We assume this committee would be in addition to the regular trustees appointed on our Board."

**President McMillan:** Does that clarify it for you, gentlemen? What shall we do with the recommendations of the Insurance Committee to the Executive Council? Are there any questions? Gentlemen, do you want to accept or reject the recommendations of the Insurance Committee?

**Dr. Weathers:** I make the motion that they be accepted, including \$25.00 allowance for removal-destruction skin epithelioma; \$7.50 for excision of local benign or cicatricial lesions, and; the negotiated revision of ob-gyn fees adopted by the Committee—report of the Committee as a whole.

[The motion was seconded by Dr. Papineau.]

**President McMillan:** All in favor of the motion let it be known by saying, "aye"; opposed, "no." The motion is carried.

**Mr. Barnes:** You will recall that the State Nurses Association made a proposition to the last Executive Committee meeting that they be considered in the development of plans for voluntary health insurance in the state. In the interim, the State Nurses Association has had a committee apparently working on this thing and here is a several-page report that the State Nurses Association has conveyed.

**Dr. London:** I should think it would be well to let this go back to the Insurance Committee.

I so move.

[The motion was seconded by Dr. Elliott.]

**President McMillan:** All in favor of the motion let it be known by saying, "aye"; opposed, "no." The motion is carried.

**President McMillan:** We have a request from The Hospital Care Association for approval to National Blue Shield.

**Dr. London:** I move that the Executive Committee recommend to the House of Delegates the approval of this request.

[The motion was seconded by Dr. Shafer.]

**President McMillan:** All in favor please raise your hands. [4] All those opposed. [6] The motion is lost.

[The meeting adjourned at twelve o'clock midnight.]

# MEETINGS OF THE HOUSE OF DELEGATES

## MONDAY AFTERNOON SESSION

May 7, 1951

The first session of the Ninety-seventh Annual Meeting of the House of Delegates of the Medical Society of the State of North Carolina convened in the Ballroom of the Hotel Carolina, Pinehurst, at two-fifteen o'clock, Dr. Roscoe D. McMillan, president of the Society, presiding.

**President McMillan:** The House of Delegates of the Medical Society of the State of North Carolina will please come to order. Let us stand and have the invocation.

Almighty Guide of the universe, we beseech Thee to make us clean of thought, kind of act and deed. Free us from that petty spirit which sours the blood. Help us, O divine Guide, to tread the paths of clear dealing. Help us to scatter sunshine instead of shadows into the hearts and lives of those with whom we come in contact. Watch over us in our deliberations. Guide and direct us, for we know that we can do nothing without Thine omnipotent hand and in the end, let it be Thy will that there shall come to pass an international understanding of men and nations, united in the bond of peace, good will and mutual understanding. We ask it all for Christ, our Redeemer's, sake. Amen.

Announcements will be read by our Constitutional Secretary, Dr. Hill.

**Dr. Millard D. Hill:** The Commercial Casualty Company, the Society's Group Health Accident program, is now increasing and extending our benefits and wishes to announce the period for applying for these increased benefits has been extended to June 8th.

We have a letter from the manager of the Carolina Hotel:

"I should like at this time to extend to the Association a very cordial invitation to return here for your 97th Convention. You may be assured we will do everything possible to cooperate closely with you and give our very best efforts on your behalf."

**President McMillan:** We will have the report of the Committee on Credentials, Dr. Wingate M. Johnson, chairman.

**Dr. Wingate M. Johnson:** We can report a quorum present.

**President McMillan:** We will have the roll call of accredited delegates, Dr. Hill.

[The secretary, Dr. Millard D. Hill, called the roll and declared a quorum present.]

**President McMillan:** We will proceed with the business.

First I would like to recognize Dr. George F. Lull, Secretary-General Manager of the American Medical Association. Dr. Lull, please stand. [Applause]

Dr. Frank Wilson, the Washington office of the American Medical Association. [Applause]

Mr. Ross Porter, president of the Hospital Association of North Carolina. [Applause]

I am going to ask the first vice president to please take the chair, Dr. Joseph Elliott of Charlotte.

[The first vice president, Dr. Joseph A. Elliott, Sr., took the chair.]

**First Vice President Elliott:** Gentlemen, we will now be honored with a message from our president, Dr. Roscoe D. McMillan. [Applause]

**President Roscoe D. McMillan:** Mr. Chairman, Fellow Colleagues and Friends: To hold the highest office in the Medical Society of the State of North Carolina is an honor to be coveted and a privilege to be enjoyed. The stimulating experiences which attend the office become memories long to be cherished.

For the opportunity of serving you, I am deeply grateful. The time and effort which I have given have been compensated for, over and over. I only wish there had been more time to give.

In carrying out my duties, I have found that the cooperation of this membership is the most gratifying of all rewards. A solid spirit of cooperation has made possible the year's accomplishments.

The Executive Council is to be commended heartily for its wise and faithful assistance in promoting the interests of the Society. Council members have traveled many miles and attended many meetings; they have given freely of their time and their judgments.

Members of our various committees are likewise to be lauded for the keen and selfless manner in which they have discharged their duties under the competent leadership of their respective chairmen. Of necessity, and because of the nature of their assignments, some committees have had to work harder than others; but all have labored diligently as the need required, and all have earned my sincere appreciation and yours.

Particularly, I must take this opportunity to express my gratitude for the help of our Executive Secretary, Jim Barnes, who for two years has so ably handled the affairs of our office in Raleigh. I am deeply indebted to Jim for his wisdom, patience, efficiency, and never-failing zeal under any and all circumstances.

To other members of the administrative staff, LeRoy Cox and Miss Charlotte Rickman, I also express my thank-you's. They have never hesitated to give me courteous and splendid service.

I believe we have made progress in many areas during the past year. We have remained in sound, financial condition and have made judicious use of the funds expended. We have held the line against offensive legislation, notably the state bill to permit optometrists to examine schoolchildren. (A share of the credit for this victory goes to our dentist friend, Dr. Paul Jones, of the State Senate.) We have allowed the public to air its grievances against individual members, and our new Grievance Committee has ably prosecuted investigations. We have cultivated, especially through the work of our Public Relations and Rural Health Committees and the Woman's Auxiliary, a dependable type of good will and understanding among the citizenry of our state. We have, through our Cancer Committee and its tireless chairman, helped to foster a highly successful cancer program, the latest development of which is the establishment of a nursing home for indigent terminal cancer cases. We have initiated a needed program on chronic illnesses. We have achieved more satisfactory working relationships with the North Carolina Industrial Commission. We have developed an outstanding Emergency Medical Care Program, and the committee responsible has won praise from many quarters. We have continued our relentless search into the cause of maternal deaths. We have conducted research and investigation into many other pertinent matters. It is well nigh impossible to catalog all the achievements; if I have not mentioned them all, forgive me.

But what we have done in this year, and in the years past, is but a clue to greater things the Society may accomplish. Having been so close to the affairs of this organization for many years, and being so sure of its destiny, I am taking now the liberty of making certain suggestions and recommendations; I hope they will provoke thought and discussion and will lead to new action which is democratically approved by this body. Indulge me, friends and colleagues!

(1) It is my recommendation that the president-



elect of the Woman's Auxiliary become a liaison officer between the Auxiliary and the Society, and that she attend the first fall meeting of the Executive Council, in order that she may carry back our full program to the Auxiliary.

The staunch support of our women is of sustaining usefulness and help. The Auxiliary will know better how to proceed with its own programming if it is well informed of the Society's intentions.

(2) It is my recommendation that the Society make the holding of appropriate memorial services for our deceased members a regular part of the state convention.

The great service rendered by our fellow doctors may not call for monuments, but it is deserving of our fullest recognition. Our appreciation and devotion should be adequately expressed.

(3) It is my recommendation that the outgoing president of the Society become an ex-officio member, for one year, of the Executive Council.

This move seems logical and economical of time and personnel. There will be many places where the advices of the outgoing president will be found useful.

(4) It is my recommendation that the Society continue to support the program for revision of the Coroner System, as proposed by our special committee studying that matter.

Improper diagnosis of the cause of death is a barrier to our efforts at eliminating some of these causes. The committee's ideas deserve wider interpretation among our citizens.

(5) It is my recommendation that the Society membership, mindful of the distressing plight obtaining in our mental institutions, favor and help press for better salary scale for mental hospital personnel.

Expansion of facilities is needless unless the institutions can acquire and hold qualified help. Salary adjustments must be forthcoming at an early date. Recent appropriations should be used for this purpose.

(6) It is my recommendation that both the Committee on Fees in Industrial Cases and the Committee to Study and Recommend Publication for an Average Schedule of Medical Fees continue their work with the North Carolina Industrial Commission for another year.

Because of the fine work of these two committees in the past year, we have won certain advantages; medical claims relating to one-day-loss-of-time injuries and/or \$8 fee claims may now be settled independent of Commission action. We are grateful for this concession and for the cooperative attitude which the Commission has manifested. We hope that other mutually desirable procedures may be developed.

(7) It is my recommendation that the Society membership work diligently for the success of the four-year Medical School of the University of North Carolina, giving time and money to it. Likewise, I recommend that we work more zealously for the type of medical education which will bring more general practitioners to this rural state.

Through the rising School of Medicine at the University, and through our other medical schools, we need to encourage rural practice preceptorships. In addition, we need to participate in surveys which disclose accurately the medical and health needs of our communities; we could promote the development of supportive community economics in medicine; and we may help to educate the public on the wiser use of the rural doctor's capacity for service. It is in the rural areas where we have not closed the gaps, and where we need to demonstrate that medical opportunities are attractive.

(8) It is my recommendation that this Society tighten its efforts to see that only legislation which is acceptable to the highest standards of our pro-

fession be passed through the state legislature and the national Congress.

(a) To this end, I suggest that each scientific section of the Society name one person who may be contacted immediately when legislation of peculiar interest to that section is pending and action is needed.

(b) Also, I recommend that this Society itself sponsor a bill setting forth some minimum qualifications for persons entering any of the professions purporting to heal. (For instance, the bill might limit licenses of practice to individuals who have passed courses in basic science.)

Both items under this recommendation are made with a purpose. Our executive secretary and the Legislative Committee clearly need help in carrying the legislative burden: Item "a" would provide that. Item "b" is offered in the effort to screen out the consistent annoyances with which alert, aggressive cult practices confront us.

(9) It is my recommendation that this Society consider the adjustment of its By-Laws looking toward the chartering of an organization of Negro physicians in the state. Members of the chartered organization would be all Negro physicians who are qualified for membership in the Medical Society of the State of North Carolina. The charter grant would be subject to the approval of the House of Delegates.

Negro members of our profession deserve our recognition and cooperation. My recommendation is made after much thought and the study of plans in other states. Already, I have named a committee to consult with the American Medical Association on possible ways by which an organization of Negro physicians may affiliate with that body.

(10) It is my recommendation that the Society give even deeper consideration to the matter of improved relationships — relationships within the profession; relationships with hospitals; and relationships with other organizations and the public. Specifically, I recommend:

(a) That clearance of committee and district meeting dates be made through our executive secretary in order to avoid conflicting engagements.

Some of our members have been complaining that they are "supposed to be in two or three places at the same time."

(b) That some clearance of the activities of all our employed administrative personnel be made through our executive secretary.

This will aid us in presenting an even more consistent front to our public, and will result in economy of time and better use of personnel. The recommendation does not propose that all these employees be made responsible to the executive secretary.

(c) That the good work of our Committee on Hospitals and Professional Relations be vigorously continued to the end that any controversy between doctors and hospitals be resolved.

We believe that the right relationship is based, primarily, on clear-cut plans by which hospitals are reimbursed for hospital expenses and doctors are reimbursed for medical service.

(d) That a program of education in medical public relations be fostered among ancillary workers in physicians' offices.

Many times the quality of patient-physician relations is dependent upon ancillary helpers. For their own good, as well as for the good of doctors and the public, they need training.

(e) That the scope of the present public relations bulletin be broadened to present newsworthy Medical Society information to a mailing list which will include other key public and civic organizations and agencies of the state.

We believe that the bulletin can render larger service in this manner. News of strictly profes-



sional interest can be carried in the *Medical Journal*.

(11) It is my recommendation that this Society take a realistic and objective look at the relationships between public health and private medicine, with a view toward effecting more cooperative, constructive action where it is needed.

Doctors, like all people, sometimes oppose what they do not understand. Not all of us understand public health—its service and its problems. We are often critical without being prepared to strengthen.

Public health and private medicine must work together more honestly if the Public Health Program is to be strong, sound, decently financed, and respected.

I am speaking to you as a private doctor, and as a friend of public health—not as an authority on public health—when I say the following: The constant adding of clinics and certain other services to public health departments is a questionable investment of public funds unless these additions are accompanied by proper interpretation and education.

All screenings, immunizations, et cetera, carried on by health departments should be used for educational purposes if the health department is to become more than a free service station where neither the incentive to healthful living nor the incentive to make intelligent use of the family doctor and other medical facilities are cultivated.

Public health could stand increased emphasis upon education and community action. Health departments need better quarters, better budgets, and more personnel. Only through community action and education can we stimulate enough local interest to secure enough local, financial support for local health units. People at home will pay for what they want. Too much financing and making of policy for local health departments by state and federal governments robs the local departments of their autonomy, their initiative and their community potential.

The broad, basic preventive programs in public health — sanitation, nutrition, health education, communicable disease control, et cetera—still have much to accomplish in North Carolina, despite the splendid work done by our public health forces. As we move into a critical defense period, with attack and biological warfare a possibility, we know that public health will be loaded with new and heavy responsibilities. We must be ready for any eventuality.

To help our public health colleagues build the type of efficient, progressive service in which we all will have increased pride and confidence, and to demonstrate that doctors have a vital stake in what happens in public health, it is my suggestion that this Society:

(a) Establish a committee to make diligent study of all infant deaths in our state. (The infant death rate—high in North Carolina—is the truest index to total community health.)

(b) Establish a committee to cooperate with school health authorities on setting up sound policies and procedures for the correction of defects and for other school health services.

(c) Establish a committee to promote better statistical reporting by private doctors to local health departments, to the end that the statistics compiled by these departments may be made sufficiently accurate that productive community health programs can be based upon them.

(d) Request that the Public Relations Committee restudy the Society's school essay contest and scholarship award with the idea in mind of diverting these funds to the training of health educators—a step which would pay greater health dividends and is more in keeping with our professional objectives.

Finally, gentlemen, we come to the heart of my message to you and to the matter which is closest to me as a member of the Medical Society and as a citizen of North Carolina. I shall not speak evasively.

(12) It is my recommendation that this Society proceed at once, in order to protect its integrity and to fulfill its promise to North Carolina, in the offering of a plan of voluntary, prepaid insurance covering medical service.

Further, that this Society rescind its action of last year setting up the Medical Service Corporation.

Further, that full responsibility for processing the prepayment plan be vested in a Blue Cross-Blue Shield agency. That the Hospital Saving Association of Chapel Hill be that agency.

Further, that a committee of physicians be named to work with Hospital Saving Association in the whole matter of fee scales.

Further, that our entire membership sign up as participants of the plan in order that our citizens may place full confidence in it.

Finally, that we unite to promote extension of the plan to every family in our state.

We are in danger, gentlemen, of losing face with our people, of giving our solemn promise then retreating. Since 1948, our people have looked forward to the medical insurance plan which their doctors would develop. Our intentions were advertised broadly and applauded.

To date, we have come up with nothing but disunity on the matter. Our altruism has been obscured. No single doctor among us would go back on his word to a patient or a community. How can we, as a Society, forfeit this pledge to North Carolina?

While weicker and argue among ourselves over fees, our people are stirring restlessly. High costs of living assail them. Worry, about many matters, keeps them a prey to illness. The cost of being sick is a burden to them, and they are protesting increasingly. None of us knows how far that protest will go. But it is my best judgment that unless doctors face more realistically the economic problems of our people they—the doctors—stand to lose.

The unselfish, humanitarian motive should be paramount in dictating our move on insurance. But if we wanted to think of ourselves, we know that we, too, will benefit along with our people.

Now, last year this Society in good faith passed a resolution endorsing establishment of a Medical Service Corporation by the doctors. Friends, we doctors have no business selling insurance. Some of us who thought so earlier have seen the light. We simply do not have the time to tinker with the vast amount of machinery this would require. We do not have the practical business and actuarial experience needed to keep us from a thousand pitfalls. The quality of our medicine may be in jeopardy if we launch into this giant dollar-and-paper program. It is my prediction that it would be short-lived and its failure would reflect discredit upon us.

We should leave insurance to our friends, the insurance men. This is not only logical, it is American. It is enough for doctors to practice medicine. I have recommended that we delegate a Blue Cross-Blue Shield agency to handle our program. Blue Cross, as you know, has done a fabulously successful job of selling hospital insurance. It has gathered know-how with every passing year.

I am forced to recommend that we name Hospital Saving Association in Chapel Hill to handle our plan, for definite reasons. Let me say first that it is a matter of grievous concern to most of us that the two Blue Cross agencies in our state have not merged and remain unwholesomely competitive.



We doctors have worked hard to bring about unity and are acutely disappointed at the results.

Hospital Saving now has four doctors on its Executive Board who represent the Medical Society of the State of North Carolina. There are the same number of doctors as there are members of both the other groups (hospitals and public) combined—a factor of obvious import.

Hospital Saving is the only Blue Shield agency in the state. The Blue Shield Commission in Chicago wants only one agency, for several legitimate reasons. For the Medical Society to press for recognition of a second agency would be to embarrass Blue Shield. Likewise, the Medical Society may not desire to recommend Blue Shield privileges for an agency which does not approve adequate Medical Society representation on its Board. Hospital Saving officials have been tireless and unselfish in aiding us with our planning and in arranging every possible concession.

Hospital Saving has indicated its willingness to accept guidance from a committee of doctors which would settle disputes with regard to payment of professional fees, determine the fee for any procedure which might be added to the schedule, and periodically revise the fee schedule when such seems wise.

Finally, the naming of one agency to handle all affairs of the plan will make for simplicity of administration and supervision, as well as for flexibility.

Gentlemen, the foregoing recommendation with regard to referring this insurance program to the Hospital Saving in Chapel Hill for processing represents my most considered judgment. It is not, for me, a case of personal partiality. It is a case of having investigated all the angles and of believing that, for the best interests of the Society, this agency—for the time being at any rate—should be given the responsibility of administering our prepaid medical service insurance plan.

But let me say with real conviction that if the House of Delegates sees fit to follow the recommendation of the Committee on Prepaid Medical Service Insurance Plan in this regard, I shall honor that decision and work wholeheartedly for the success of the program. My present personal persuasions will bow before the democratic action of this body. The main thing is for us to make a decision, then stand together to see it carried out effectively.

At the present time, we do not feel, in the whole matter of this proposed insurance program, that the doctors are solidly behind it. There is even a question in our minds, as to whether you feel it is sound. For, to date, only 983 physicians—not half our membership—have signed up as participants, and this has been accomplished only after hard and serious plugging by a dedicated few. The program cannot be effective—it may be the poorest brand of public relations with the citizens of North Carolina—unless we give the program our fullest support. We must endorse it ourselves, and after the machinery has been set in motion, we must advertise it conscientiously. If you favor it, sign up to participate. If you do not favor it, do not let this convention pass without clearing the whole matter.

Fellow colleagues, to heal whatever breaches exist within our ranks, to recapture our favor with our people, and to do justly by them, to clear our decks so that we may be prepared for other action of importance, let us settle this matter once and for all!

Let us move positively and dynamically to place this Society in a position to lead. I thank you. [Applause]

**First Vice President Elliott:** I think you will all agree with me that we have a fine president. He has given us a great deal of food for thought. Due

to his long association with the Medical Society in an official capacity, he probably knows more about the problems of the Society than any other man. He has made many recommendations here to try to solve some of these problems and it is customary to appoint a committee to review these recommendations and bring in a report at the next meeting of the House of Delegates. So I will appoint on that committee Dr. W. A. Sams, chairman, Dr. Wingate Johnson, and Dr. Harry Johnson, who will report Wednesday afternoon at two o'clock on their recommendations.

[President McMillan resumed the chair.]

**President McMillan:** The Secretary-Treasurer's report, Dr. Hill.

**Dr. Millard D. Hill:** Members of the House of Delegates: This is the first time I have had an opportunity to report for a full year since elected to this office.

The report of the Secretary-Treasurer, Medical Society of the State of North Carolina, May 7, 1951: This report refers to the fiscal year ended December 31, 1950, which was the first full year of service as Secretary-Treasurer. Narratively the report concerns the period since I last reported to the House of Delegates, May 1, 1950.

As Secretary-Treasurer and in cooperation with the executive secretary, close attention has been given to your fiscal affairs through the year. In many ways it was the most successful year in the history of the Society. Paid membership, as well as members in general, attained the highest level in our history and passed the 2500 mark as of December 1, 1950.

The support of the membership has been gratifying despite the level of dues and in no quarters has there been particular resistance to the support requested of members by action of this House of Delegates. Scarcely less supportive, the membership has maintained its fealty to the American Medical Association. All current evidences point to a high sense of membership loyalty and a manifest esprit de corps throughout the life and activity of the Society. We of the official family and headquarters office gratefully recognize this good sense of responsibility in this time of stress and strain upon the profession.

One is increasingly aware of the load which a growing membership and an extended activity has imposed upon your officials. So must you be aware of the increased services to the members and, more particularly, to the public and the essentiality of your continued support during these times.

Headquarters office, under the administration of the executive secretary, has been diligent and effective in the performance of your affairs and services. It deserves and must have our best support for a job well done and a future activity which can scarcely be diminished in the light of our time and extensive membership.

As of May 2, 1951, there were 2243 members in good standing in the State Society. Comparably, this represents 78 per cent of the total membership attained for the previous year.

As of December 1, 1950, the membership stood at the high level of 2501 members of which more than 2000 had not attained honorary fellowship status. This accomplishment in membership by the Society resulted in retention of our three delegates to A.M.A. despite its revision of the allocation base. It is a notable fact that our headquarters office has a progressive record in the promotion of membership among eligible and ethical physicians in the state. Its efforts in this respect may be remarked upon and commended.

The past year marks the first in which the State Society had the added responsibility of processing A.M.A. dues for its members. Approximately 76 per cent of the total membership of the Society



paid A.M.A. dues within the calendar period for which such dues were levied. This percentage will have been augmented by late remittances. It should be said that the responsibility of accounting for, depositing, safeguarding, and disposing of these dues has devolved heavily upon headquarters office, particularly of late months, and one must concede that some difficulties will arise in isolated instances which all of us stand ready to rectify wherever possible.

Where clarity is lacking, one must exercise patience with our pledge that all procedures will be expedited in so far as feasible.

It suffices to observe that the accounting of your fiscal affairs has been honest, complete, and secure. At the close of 1950 there was a substantial accrual of assets which has been again added to the reserve fund through the purchase of United States Government bonds.

The audit report of the period January 1, 1950, to December 31, 1950, as prepared and certified by A. T. Allen and Company, certified public accountants, Raleigh, North Carolina, is herewith attached and said report forms a part of this report of your treasurer.

Again it may be remarked upon that the business activity of your headquarters office accounts for a substantial segment of the income accruing to the Society during the year. Gearing the office and personnel to increasing such production should be a progressive goal of the Society.

I herewith tender the annual audit report and recommend this report be accepted by the House of Delegates.

[The signed original audit report of A. T. Allen and Company, certified public accountants, Raleigh, is on file with the office of the executive secretary.]

#### AUDITOR'S REPORT

12 Months Ended December 31, 1950  
MEDICAL SOCIETY OF THE STATE OF  
NORTH CAROLINA, INCORPORATED  
Raleigh, North Carolina

#### OFFICERS:

Dr. Roscoe D. McMillan, President.....Red Springs  
Dr. Fred C. Hubbard, President-Elect,

North Wilkesboro

Dr. Joseph A. Elliott, First Vice-Pres.....Charlotte  
Dr. Henderson Irvin, Second Vice-Pres.....Charlotte  
Dr. Millard D. Hill, Secretary-Treasurer.....Raleigh  
Mr. James T. Barnes, Executive Secretary, Raleigh  
Chairman and Members of the Finance Committee,  
Medical Society of the State of North Carolina, Inc.,  
Raleigh, North Carolina  
Gentlemen:

Pursuant to engagement, we have audited the books and records of the Medical Society of the State of North Carolina, Inc., Raleigh, North Carolina, for the period beginning January 1, 1950, and ending December 31, 1950, and present herewith our report.

#### Exhibits and Schedules:

In presenting to you our findings, as the result of the audit, we have prepared three Exhibits and three Schedules, as enumerated in the Index, which are attached hereto as a part of this report.

#### Balance Sheet—Exhibit "A":

The first statement is a list of the Assets, Liabilities, Reserves and Net Worth, which we designate as Balance Sheet, December 31, 1950, Exhibit "A". This Balance Sheet has been divided into two sections. One section contains the Current Operating Fund, which represents the Current Assets, Liabilities and Reserves, while the other Fund has been designated as a Capital or Non-Operating Fund and which contains the office equipment owned and used by the Medical Society at estimated values established in a prior year and at actual cost for purchases during the last two years.

The cash in the First Citizens Bank and Trust Company, Raleigh, North Carolina, in the amount of \$14,874.13, was verified through a reconciliation of the balance as shown by the records of the Medical Society with a certificate which was obtained independently from the bank. This reconciliation is shown in detail in Schedule—1 of the report.

Accounts Receivable in the amount of \$263.23 is shown on the Balance Sheet and this figure represents the total of several uncollected balances due from local advertisers for advertising in the State Medical Journal. As the amount is relatively small and the accounts deemed "good," no verification of them was made. At the end of the year the Executive Secretary determined \$185.00 of Accounts Receivable to be "bad" and charged that amount off. The balance of \$263.23 is after this \$185.00 charge-off.

The investment in United States Defense and Savings Bonds has been shown at cost value of \$46,724.00, in the Balance Sheet, and in detail in Schedule—2 of this report. This figure includes \$25,160.00 expended in 1950 for three (3) \$10,000.00 and four (4) \$1,000.00 bonds. The Series "F" Bonds have an increment in value, due to lapse of time since date of purchase, of approximately \$2,087.60; however, this additional value has not been taken into account in this report.

The office equipment and furniture which is shown on the Balance Sheet in the amount of \$5,547.42 is listed in detail in Schedule—3. This amount represents an estimate made in a prior year and adjusted for purchases made during the last two years. The items shown herein represent cost value of the equipment of the Medical Society, now located in the office of the Executive Secretary and in the office of the Secretary for Public Relations, both in Raleigh, North Carolina. As there were no Liabilities outstanding against this office equipment, we have shown the entire amount as Net Worth—Capital Fund—in the Balance Sheet.

Under the "Liabilities" section we have listed those accounts, expenses, etc., incurred prior to December 31, 1950, for which statements or accounts were rendered or for which payment was due. "Refunds Payable" in the amount of \$34.57 represents the amount of dues overpaid by various members and which were still held in credit escrow at the end of the year. The \$70.00 "Due American Medical Association" is for A. M. A. dues collected by the Society and not turned over to A. M. A. at December 31, 1950, because of lack of some required information. "Accrued Expenses Payable" of \$224.97 represents amount due for various expenses incurred and billed for before December 31, 1950. These were paid during the course of the audit. \$18.90 "Due Hospital Saving Association," is the amount withheld from employees' salaries under a group plan and due to be paid to the Insurance Company. The pay roll taxes, \$31.88, for Social Security and \$295.30 for Withholding, were paid during the course of the audit.

In November of the current year the Society was notified by the Employment Security Commission of North Carolina that it, the Society, after a field audit of the Society's records, had been determined to be an "employer" under the terms of the Employment Security Law of North Carolina and as such liable for unemployment compensation contributions for the year 1950. Formal "Notice and Demand for Payment" was received for assessed contributions and interest totaling \$517.65, covering period from January 1, 1950, through September 30, 1950. Upon advice of counsel a "Protest and Request for Hearing" was filed with the Commission and the matter will come up for hearing sometime late in the spring of 1951. Until this is settled it was decided by the Executive Secretary, after consultation with counsel, that no Federal return



for Federal Unemployment Tax would be filed. It is not believed that the Society will be held liable under the terms of the law because of a section therein specifically excluding from taxability "service performed in the employ of a corporation organized and operated exclusively for scientific or educational purposes, no part of the net earnings of which inures to the benefit of any private shareholder or individual."

The figure of \$1,594.50 for "Reserves" is made up of two amounts. One of these is \$600.00, representing a Reserve for Scholarship for Marion McMillan, said person being a high school student, winner of such a scholarship in an essay contest. This amount is held in escrow for payment to a college which she chooses upon graduation from high school. The other amount of \$994.50 is designated Reserve for Mental Hygiene Committee, which Reserve is in the process of being built to an amount of \$5,000.00 to cover expenses and costs of the said committee in its rehabilitation work. To the balance in this account at January 1, 1950 of \$500.00 was added the excess of the Budget Appropriation of \$500.00 over \$5.50 expenses incurred in 1950, or \$494.50, resulting in the balance at December 31, 1950 of \$994.50.

The "Net Worth" section of the Balance Sheet is comprised of two figures: \$59,591.24 being the balance of the Current Operating Fund-Net Worth for the year; and \$5,547.42 representing the balance of Capital Fund-Net Worth. The Current Operating Fund-Net Worth balance was arrived at by adding to the balance January 1, 1950 of \$48,686.81, the amount of Net Income from operations for the current year—\$13,136.05, and deducting therefrom Expenditures for Capital Assets, \$1,737.12 and allocation to Reserve for Mental Hygiene Committee, \$494.50. The Capital Fund-Net Worth balance is derived from adding purchases during year for Capital Assets in the amount of \$1,737.12 to the balance January 1, 1950, of \$3,810.30.

#### Statement of Income and Expenses—Exhibit "B":

A statement showing a budget comparison of the income and expenses for the twelve-months period has been shown in Exhibit "B". This statement is, in effect, a statement of operations for the year, and by examination it will be seen that the revenue or income of \$98,704.22 exceeded the expenses of \$87,305.29 by \$11,398.93. However, there was included in the expenses \$1,737.12 in Capital Expenditures for equipment. Eliminating these we show income from operations of \$13,136.05, which has been added to the unexpended balance of the Current Fund and shown in the Net Worth section of the Balance Sheet. In comparison with the budget, actual income was less than the budget expectation by \$5,183.28. The main items accounting for this seem to be, upon analysis, \$4,425.00 less realized than expected from Sales of Exhibitors' Spaces due to fact that most of the charges for spaces at the 1950 Convention were collected in 1949 and so reflected in that year's business, and \$918.35 less income from Journal Advertising than expected. Further examination shows that actual expenses were less than the budget provision by \$13,275.57, due mainly to \$2,749.15 less expenses than expected in the Intra-Functional Activity budget and \$8,286.73 less expenses than budgeted in the Public Relations program budget.

#### Cash Receipts and Disbursements—Exhibit "C":

A statement showing in detail the cash receipts and disbursements of the Medical Society during the year under review has been shown in Exhibit "C" and may be summarized as follows:

Cash Balance January 1, 1950.....	\$ 28,516.08
Cash Receipts During the Year.....	146,853.20
<b>Total Cash Available .....</b>	<b>\$175,369.28</b>

#### Less: Disbursements During the Year:

For Operations .....	\$86,565.03
To A. M. A.—Dues.....	47,033.00
For Capital Expenditures..	1,737.12
For U. S. Bonds.....	25,160.00
	<b>160,495.15</b>

Cash Balance at December 31, 1950.....\$ 14,874.13

We made a careful analysis of the cash transactions and, where practicable, traced the receipts to their original source. Disbursements for expenses were supported by cancelled checks and invoices issued in the regular course of business. Our examination did not disclose any irregularities in the cash and we believe the funds have been carefully and honestly handled and all accounted for.

#### General Comments:

A surety bond covering faithful performance of the Secretary-Treasurer, Dr. Millard D. Hill, in the amount of \$50,000.00, is in force and held by the Medical Society and was examined by us. Also in force and examined by us were: a Primary Commercial Blanket Honesty Bond in the amount of \$25,000.00; a fire insurance policy covering fire loss on office equipment, books and records in the office of the Executive Secretary, Raleigh, North Carolina, in the amount of \$2,500.00; an Automobile Schedule Liability Policy; and a Standard Workmen's Compensation and Employer's Liability Policy.

We found the records maintained to be in excellent condition; we were extended every courtesy and cooperation during the course of the audit; and we experienced no trouble in making our audit and obtaining the necessary information for this report.

WE HEREBY CERTIFY that, we have audited the books and records of the Medical Society of the State of North Carolina, Incorporated, for the period from January 1, 1950 to December 31, 1950, and in our opinion the within statements show the correct financial condition of the Society at the close of the year, together with the operating result for the twelve months ended at that time, according to information and explanations given us and as shown by the books, subject to the within qualifications.

Respectfully submitted,

A. T. ALLEN & COMPANY,  
Certified Public Accountants

Raleigh, N. C.  
January 19, 1951

Medical Society of the State of North Carolina, Inc.  
Raleigh, North Carolina

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##### Schedules:

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Investment in United States Bonds.....	Schedule—2
Capital Assets .....	Schedule—3

#### EXHIBIT "A"—BALANCE SHEET December 31, 1950

##### ASSETS

<b>CURRENT OPERATING FUND:</b>	
First-Citizens Bank and Trust Co., Raleigh, N. C. (Schedule—1) .....	\$14,874.13
Accounts Receivable .....	263.23
Investment in United States Savings and Defense Bonds at Cost—(Schedule—2) .....	46,724.00
<b>TOTAL CURRENT OPERATING FUND.....</b>	<b>\$61,861.36</b>
<b>CAPITAL OR NON-OPERATING FUND:</b>	
Office Furniture, Fixtures and Equipment—(Schedule—3) .....	5,547.42
<b>TOTAL ASSETS .....</b>	<b>\$67,408.78</b>

## LIABILITIES, RESERVES AND NET WORTH:

<b>LIABILITIES:</b>			
Refunds Payable	\$	31.57	
Due American Medical Association		70.00	
Accrued Expenses Payable		221.97	
Due Hospital Saving Association		18.90	
Accrued Federal Social Security Tax		31.88	
Accrued Federal Withholding Tax		295.30	
<b>TOTAL LIABILITIES</b>	<b>\$</b>	<b>675.02</b>	
<b>RESERVES:</b>			
Reserve for Scholarship for Marion McMillan	\$	600.00	
Reserve for Mental Hygiene Committee:			
Balance January 1, 1950	\$500.00		
ADD: Excess of Budget Appropriation over Expenses in 1950	494.50	991.50	
<b>TOTAL RESERVES</b>	<b>\$</b>	<b>1,591.50</b>	
<b>NET WORTH:</b>			
Current Operating Fund -			
Balance January 1, 1950	\$18,686.81		
ADD: Net Income from Operations	13,136.05		
Exhibit "B"	\$61,822.86		
Total			
Deduct: Expenditures Made for Capital Fund	\$1,737.12		
Allocation to Reserve for Mental Hygiene Committee	494.50	2,231.62	
<b>Total Current Operating Fund 12-31-50</b>		<b>\$59,591.24</b>	
Capital Fund:			
Balance January 1, 1950	\$ 3,810.30		
ADD: Purchases Made During Year Through Current Funds	1,737.12		
<b>Total Capital Fund December 31, 1950</b>	<b>\$</b>	<b>5,547.42</b>	
<b>TOTAL LIABILITIES, RESERVES AND NET WORTH</b>	<b>\$67,108.78</b>		

## EXHIBIT "B"

STATEMENT OF INCOME AND EXPENSES  
12 Months Ended December 31, 1950

	Budget Provision	Actual	Difference
<b>INCOME:</b>			
Membership Dues Current and Prior Years	\$80,000.00	\$78,716.00	\$ 1,284.00
Public Relations Assessments 1949	0.00	1,145.00	1,145.00
Interest on Gov't. Bonds	287.50	287.50	0.00
Sales of Exhibitor's Spaces	6,000.00	1,575.00	1,425.00
Journal Advertising—Local	(17,000.00)	3,301.03	918.35
Journal Advertising—Nat.	(12,780.62)	197.75	95.45
Sales of Rosters	(350.00)	247.70	
Journal Subscriptions	( )	438.62	203.62
1% Commission from A.M.A. for Collecting Dues	(250.00)	15.00	
Miscellaneous Refunds	( )		
<b>TOTAL INCOME</b>	<b>\$103,887.50</b>	<b>\$98,704.22</b>	<b>\$ 5,183.28</b>
<b>EXPENSES:</b>			
<b>Executive Budget:</b>			
A-1 Expense—President	\$ 900.00	\$ 857.07	\$ 42.93
A-2 Salary—Sec. Treas.	2,100.00	2,400.00	0.00
A-3 Travel—Sec. Treas.	600.00	600.00	0.00
A-4 Salary—Exec. Sec.	7,000.00	6,999.96	.04
A-5 Travel—Exec. Sec.	2,100.00	665.79	1,434.21
A-6 Clerical Assistants—Executive Office	4,783.62	1,636.33	117.29
A-7 Equipment—Exec. Off.	1,000.00	756.12	243.58
A-8 Office Expense—Executive Office	3,600.00	4,773.19	1,173.19
A-9 Bonding	337.50	337.50	0.00
A-10 Audit	150.00	185.00	35.00
A-11 Pay Roll Taxes	128.00	150.38	22.38
A-12 Fire Insurance	50.00	3.30	46.70
A-13 Publications—Reports and Executive Aid	100.00	160.19	60.19
<b>Totals Executive Budget</b>	<b>\$ 23,119.12</b>	<b>\$22,525.13</b>	<b>\$ 628.99</b>
<b>Journal Budget:</b>			
B-1 Publication of Journal	\$ 17,000.00	\$17,716.35	\$ 716.35
B-2 Cuts for Journal	500.00	430.67	69.33
B-3 Salary—Editor	1,800.00	1,800.00	0.00
B-4 Salary—Ass't. Editor	2,100.00	2,100.00	0.00
B-5 Office Expense—Editorial Office	400.00	381.49	15.51
B-6 Office Expense—Business Mgr's. Office	300.00	162.88	137.12
B-7 Equipment—Business Mgr's. Office	0.00	0.00	0.00
B-8 Travel For Journal	0.00	0.00	0.00
B-9 Pay Roll Taxes	39.00	58.56	19.56
B-10 Refunds, Subscriptions, etc.	75.00	68.15	11.85
<b>Totals Journal Budget</b>	<b>\$ 22,214.00</b>	<b>\$22,716.10</b>	<b>\$ 502.10</b>

## Intra-Functional Activity Budget:

C-1 Expense of Executive Committee and Travel of Councilors	\$ 2,867.00	\$ 1,093.99	\$ 1,773.01
C-2 Travel in District Councilors	250.00	250.00	0.00
C-3 Expenses—Councilors	200.00	119.83	80.17
C-4 Expenses—Legislative Committee	500.00	219.16	250.54
C-5 Expenses—Public Relations Committee	300.00	598.16	298.16
C-6 Expenses—Maternal Welfare Committee	2,000.00	1,280.00	720.00
C-7 Expenses—Rural Health and Medical Care Com.	5,500.00	6,055.78	555.78
C-8 Expenses—Cancer Committee	300.00	300.00	0.00
C-9 Expenses—Convention Arrangements Com.	300.00	0.00	300.00
C-10 Expenses—Scientific Committee	200.00	17.50	182.50
C-11 Expenses—Mental Hygiene Committee	500.00	5.50	194.50
C-12 Expenses—Committees in General	800.00	997.33	197.33
<b>Totals Intra-Functional Activity Budget</b>	<b>\$ 13,717.00</b>	<b>\$10,967.85</b>	<b>\$ 2,749.15</b>

## Extra-Functional Activities Budget:

D-1 Expenses of A. M. A. Delegates	\$ 1,675.74	\$ 1,676.46	\$ .72
D-2 Conference Dues	100.00	5.00	95.00
D-3 Woman's Auxiliary	250.00	200.00	50.00
D-4 Expenses of Delegates to A. M. A. Regional Conference	100.00	0.00	100.00
<b>Totals Extra-Functional Activities Budget</b>	<b>\$ 2,125.74</b>	<b>\$ 1,881.46</b>	<b>\$ 244.28</b>

## Public Relations Program:

E-1 Salary—Secretary for Public Relations	\$ 6,100.00	\$ 6,399.96	\$ .94
E-2 Travel—Secretary for Public Relations	2,400.00	1,049.41	1,350.59
E-3 Travel—Committee Chairman	100.00	0.00	100.00
E-4 Stenographic Asst. Public Relations	2,100.00	2,160.00	60.00
E-5 Equipment—Public Relations Office	1,500.00	980.70	519.30
E-6 Expenses—Public Relations Office	2,335.00	3,370.45	1,035.45
E-7 Pay Roll Taxes	81.00	77.40	3.60
E-8 Publications and Executive Aids	250.00	231.98	18.02
E-9 Radio Production, Distribution and Broadcasting	5,000.00	828.91	4,171.09
E-10 News and Press Releases	5,000.00	2,692.06	2,307.94
E-11 Public and Personalized Activities	1,200.00	261.52	938.48
E-12 Expenses—High Sch. Essay Contest	800.00	660.88	139.12
E-13 Collateral Public Relations Activities With Other Committee Activities	2,511.00	0.00	2,511.00
<b>Totals Public Relations Program</b>	<b>\$ 30,000.00</b>	<b>\$18,713.27</b>	<b>\$11,286.73</b>
Allocation to Rural Health—Budget C-7	3,000.00		
<b>Totals Public Relations Program</b>	<b>\$ 27,000.00</b>	<b>\$18,713.27</b>	<b>\$ 8,286.73</b>

## Annual Sessions Convention Budget:

F-1 Programs	\$ 400.00	\$ 512.30	\$ 112.30
F-2 Hotel Expense	1,600.00	1,337.64	262.36
F-3 Publicity Promotion	150.00	85.21	64.79
F-4 Entertainment (General)	300.00	195.72	104.28
F-5 Orchestra	300.00	200.00	100.00
F-6 Expenses and Honorarium—Guest Speakers	350.00	465.19	115.19
F-7 Fee and Expense of Banquet Speaker	300.00	0.00	300.00
F-8 Electric Amplification	175.00	122.00	53.00
F-9 Booth Installations and Supplies	1,500.00	1,336.50	163.50
F-10 Exhibit Expenses and Promotion	500.00	1,010.99	510.99
F-11 Badges	250.00	247.21	2.79
F-12 Transactions Reporting Service	1,000.00	1,208.57	208.57
<b>Totals Annual Sessions Convention Budget</b>	<b>\$ 6,825.00</b>	<b>\$ 6,751.33</b>	<b>\$ 73.67</b>



Miscellaneous Budget:			
G-1 Previous Accounts Payable	\$ 100.00	\$ —0—	\$ 100.00
G-2 Refunds	500.00	— 0	500.00
G-3 Retainer of and Fees for Legal Counsel	2,500.00	1,803.22	696.78
G-4 Reporting (Executive Committee, etc.)	1,200.00	1,042.97	157.03
G-5 President's Jewel	50.00	43.93	4.05
G-6 General Practitioner of Year Token	50.00	167.78	117.78
G-7 Reprint of Roster	150.00	—0—	150.00
G-8 Contingency and Emergency	1,000.00	690.23	309.77
Totals Miscellaneous Budget	\$ 5,550.00	\$ 3,750.15	\$ 1,799.85
TOTAL EXPENSES	\$100,580.86	\$87,305.29	\$13,275.57

## SUMMARY:

TOTAL INCOME	\$98,704.22
LESS: EXPENSES:	
Executive Budget	\$22,525.13
Journal Budget	22,716.10
Intra-Functional Activity Budget	10,967.85
Extra-Functional Activity Budget	1,881.46
Public Relations Program	18,713.27
Annual Sessions Convention Budget	6,751.33
Miscellaneous Budget	3,750.15
	87,305.29

EXCESS OF INCOME OVER EXPENSES	\$11,398.93
ADD: Capital Expenditures From Current Fund	1,737.12

NET INCOME FROM OPERATIONS—EXHIBIT "A"—\$13,136.05

## EXHIBIT "C"

## CASH RECEIPTS AND DISBURSEMENTS

12 Months Ended December 31, 1950

## RECEIPTS:

## CASH RECEIPTS FROM REGULAR OPERATIONS:

Membership Dues—	
Current and Prior Years	\$78,716.00
Public Relations Assessments—1949	1,145.00
Medical Journal Advertising—Local	2,916.86
Medical Journal Advertising—National	11,974.62
Rebate on Cooperative Advertising Contract	806.00
Reimbursed Costs of Engraving Plates	589.57
Sale of Exhibitors' Spaces at State Convention—1950	1,575.00
Medical Journal Subscriptions and Sales	247.70
Sale of Rosters	196.75
Interest on U. S. Government Bonds	287.50
Overcollection of Dues, Later Refunded	71.50
Overcollection of Dues, Held in Escrow at 12-31-50	34.57
1% Commission from A. M. A. for Collecting Dues	438.62
Reimbursement of Traveling Expenses from A. M. A.	239.32
Miscellaneous Refunds—	
Credits to Expenses	511.19

TOTAL CASH RECEIPTS FROM REGULAR OPERATIONS	\$ 99,750.20
AMERICAN MEDICAL ASSOCIATION REGULAR DUES COLLECTED	16,995.00
AMERICAN MEDICAL ASSOCIATION FELLOWSHIP DUES COLLECTED	108.00

TOTAL RECEIPTS	\$146,853.20
CASH BALANCE JANUARY 1, 1950	28,516.08

TOTAL TO BE ACCOUNTED FOR	\$175,369.28
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## DISBURSEMENTS:

## DISBURSEMENTS FOR CURRENT OPERATIONS:

Expenditures—	
Executive Budget	\$22,539.66
Less: Capital Expenditures—	
Office Equipment	756.42
	\$21,783.24
Expenditures—Journal Budget	23,127.16
Expenditures—Intra-Functional Activity Budget	10,913.55
Expenditures—Extra-Functional Activity Budget	1,881.16
Expenditures—Public Relations Program Budget	\$18,694.26
Less:	
Capital Expenditures—	
Office Equipment	980.70
	17,713.56
Expenditures—Annual Sessions Convention Budget	7,001.97
Expenditures—Miscellaneous Budget	3,577.65
Refunds of Dues	
Overcollected	71.50
Fourth Quarter 1949	
Federal Withholding and Social Security Taxes	494.64
TOTAL DISBURSEMENTS FOR CURRENT OPERATIONS	\$ 86,565.03

## PAYMENTS TO AMERICAN MEDICAL ASSOCIATION:

Regular Dues Collected	\$46,925.00
Fellowship Dues Collected	108.00

TOTAL PAYMENTS TO AMERICAN MEDICAL ASSOCIATION	47,033.00
EXPENDITURES FOR CAPITAL ASSETS	1,737.12
PURCHASE OF U. S. GOVERNMENT BONDS	25,160.00

TOTAL DISBURSEMENTS	\$160,493.15
CASH BALANCE DECEMBER 31, 1950:	
First Citizens Bank and Trust Co., Raleigh, N. C.	14,874.13
TOTAL ACCOUNTED FOR	\$175,369.28

## SCHEDULE—1

## RECONCILIATION OF BANK ACCOUNT

December 31, 1950

## FIRST-CITIZENS BANK AND TRUST COMPANY, RALEIGH, N. C.:

Balance Per Bank Statement	\$15,898.33
LESS: Outstanding Checks:	

Number 605	\$ 1.00
880	3.00
920	3.33
934	3.00
935	41.31
936	18.06
937	21.00
938	3.50
939	450.00
940	144.44
941	3.30
942	5.00
943	327.26
	1,024.20

BALANCE PER BOOKS—TO EXHIBIT "A"	\$14,874.13
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## SCHEDULE—2

## INVESTMENT IN UNITED STATES BONDS

December 31, 1950

## DEFENSE BONDS—SERIES "F":

		Date of Issue	Date of Maturity	Par Value at Maturity	Cost
No.	M75369F	12-1-41	12-1-53	\$ 1,000.00	\$ 740.00
	M75370F	12-1-41	12-1-53	1,000.00	740.00
	M75371F	12-1-41	12-1-53	1,000.00	740.00
	M75372F	12-1-41	12-1-53	1,000.00	740.00
	M75373F	12-1-41	12-1-53	1,000.00	740.00
	M75374F	12-1-41	12-1-53	1,000.00	740.00
	M98838F	1-1-42	1-1-54	1,000.00	740.00
	M98837F	1-1-42	1-1-54	1,000.00	740.00
	M98836F	1-1-42	1-1-54	1,000.00	740.00
	M98835F	1-1-42	1-1-54	1,000.00	740.00
	M98834F	1-1-42	1-1-54	1,000.00	740.00
	M98833F	1-1-42	1-1-54	1,000.00	740.00
	C89019F	12-1-41	12-1-53	100.00	74.00
	C89020F	12-1-41	12-1-53	100.00	74.00
	C89021F	12-1-41	12-1-53	100.00	74.00
	C89022F	12-1-41	12-1-53	100.00	74.00
	C89023F	12-1-41	12-1-53	100.00	74.00
	C89024F	12-1-41	12-1-53	100.00	74.00
	C89025F	12-1-41	12-1-53	100.00	74.00
	C89026F	12-1-41	12-1-53	100.00	74.00
	C89818F	1-1-42	1-1-54	100.00	74.00
	C89819F	1-1-42	1-1-54	100.00	74.00
	C89820F	1-1-42	1-1-54	100.00	74.00
	C89821F	1-1-42	1-1-54	100.00	74.00
	C89822F	1-1-42	1-1-54	100.00	74.00
	C89823F	1-1-42	1-1-54	100.00	74.00
	C89824F	1-1-42	1-1-54	100.00	74.00
	C89825F	1-1-42	1-1-54	100.00	74.00
	X356002F	4-1-50	4-1-62	10,000.00	7,400.00
	X356003F	4-1-50	4-1-62	10,000.00	7,400.00
	X356004F	4-1-50	4-1-62	10,000.00	7,400.00
	M1644801F	4-1-50	4-1-62	1,000.00	740.00
	M1644802F	4-1-50	4-1-62	1,000.00	740.00
	M1644803F	4-1-50	4-1-62	1,000.00	740.00
	M1644804F	4-1-50	4-1-62	1,000.00	740.00

## SAVINGS BONDS—SERIES "G":

Interest Rate 2½% Payable		From Date of Issue			
No.	Semi-Annually				
M1186465G	12-1-42	12-1-54	\$ 1,000.00	\$1,000.00	
M1186466G	12-1-42	12-1-54	1,000.00	1,000.00	
M1376514G	4-1-43	4-1-55	1,000.00	1,000.00	
M1376515G	4-1-43	4-1-55	1,000.00	1,000.00	
M1376516G	4-1-43	4-1-55	1,000.00	1,000.00	
D616518G	4-1-43	4-1-55	500.00	500.00	
M1905733G	9-1-43	9-1-55	1,000.00	1,000.00	
M2355967G	2-1-44	2-1-56	1,000.00	1,000.00	
M2700601G	4-1-44	4-1-56	1,000.00	1,000.00	
M2700600G	4-1-44	4-1-56	1,000.00	1,000.00	
M2772895G	6-1-44	6-1-56	1,000.00	1,000.00	
M2772896G	6-1-44	6-1-56	1,000.00	1,000.00	

TOTAL PAR VALUE AT MATURITY	\$59,100.00
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TOTAL COST VALUE AT DATE OF ACQUISITION—EXHIBIT "A"	\$16,724.00
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SCHEDULE—3  
SCHEDULE OF CAPITAL ASSETS  
December 31, 1950

<b>EXECUTIVE OFFICE:</b>	
Wooden File Case—Letter Size	\$ 21.66
Typewriter Desk	25.00
Steel Office Safe	150.00
Burroughs Adding Machine	200.00
Checkwriter—Paymaster	40.00
Electric Mimeograph Machine	300.00
Steel File Case—Letter Size	20.00
Four Steel Card Files	20.00
Office Chair	35.20
One Desk	62.55
Steel Filing Cabinet	24.50
Office Desk	47.95
Letter File—Two Drawer	29.46
Steel Filing Cabinet	71.75
Office Chairs	40.00
Office Desk	87.29
Office Equipment—Miscellaneous	1,149.39
One (1) Telephone Table	15.45
Two Pairs 12" x 38" C. S. Vents and Brackets	8.77
One (1) 20" Vertical Paper Cutter	7.56
One (1) Welch Fan	40.80
One (1) Emerson Fan	21.67
One (1) Desk Lamp	10.26
Two (2) Master Model Audographs and Attachments	725.67
One (1) Map of Greater Carolinas	37.50
Two (2) Files 3' x 5'	11.86
One (1) Remington Electric Deluxe Typewriter	337.90
Three (3) Pendaflex Frames	5.57
Two (2) Grey Steel Cabinets	103.00
Three (3) Transfer Files	11.89
One (1) Spec. D. Outfit File	7.25
Two (2) Legal Filing Cabinets	19.90
One (1) Filing Shelf	2.50
Plywood Carrying Case for Audograph	17.00
Map Framed	3.61
Charter Framed	2.57
Cash Box	2.79
Steel Desk	158.98
Three (3) Desk Trays With Stackers	8.57
Waste Basket	1.40
Large Chair Mat	9.27
Glass Desk Top	11.68
Stenograph and Tripod	100.70
Magic Mailer	6.61
Four Drawer Steel Filing Cabinet	78.03
Four Pendaflex Steel Frames	7.42
Remington Electric Typewriter	430.15
Postal Scale	6.50
Numbering Machine	14.88
Filing Stool	11.23
<b>TOTAL EXECUTIVE OFFICE</b>	<b>\$4,566.72</b>
<b>PUBLIC RELATIONS OFFICE:</b>	
Four (4) Aluminum Desk Trays With Supports	8 9.00
Steel Costumer	14.20
Postal Scale	4.00
Cash Box	1.50
Supply Cabinet	37.00
Two (2) Waste Baskets	7.00
Metal Executive Desk	112.60
Executive Chair	48.80
Two (2) Side Arm Chairs	60.40
Metal Secretary Desk	136.10
Secretary Chair	30.20
Storage Cabinet	37.00
Two (2) Chair Mats	12.90
Hinge Top Card File	1.60
Stapler	4.95
Pencil Sharpener	1.95
Punch	3.15
Metal Letter File With Lock	61.60
Storage Cabinet	37.00
Royal Electric Typewriter	133.31
Two (2) Electric Fans	63.29
Four Drawer Metal File	69.49
Two Drawer Metal File With Lock and Base	18.36
Supply Cabinet	75.00
<b>TOTAL PUBLIC RELATIONS OFFICE</b>	<b>980.70</b>
<b>TOTAL CAPITAL ASSETS—EXHIBIT "A"</b>	<b>\$5,547.42</b>

**President McMillan:** Report of the executive secretary, Mr. James T. Barnes.

**Mr. James T. Barnes:** Mr. President, Members of the House of Delegates, Distinguished Friends and Visitors: I come again, despite vicissitudes and difficulties which at times have seemed great, to report upon a year of duty in your employ. In doing so, I utter a profound prayer to the God from whose source of grace and strength I have found the capacity to accomplish so much for you and your cause in this transpiring year. Nor can I be

less thankful nor unmindful of the many sources of aid and encouragement which have emanated from your Society officials, the leaders of component societies and the ever-vital leadership, understanding and cooperation of the membership of this grand old organization. To all these, individually and collectively, I express a genuine debt and a clear sense of gratitude.

In assembling these thoughts to render a report to you, I have been reminded of a day more than four years ago when an old physician friend wrote me this message via a simple postal card: "Dear Jim: I am glad the Medical Society found you. I know you will make them a dutiful secretary. The issues are always the same. All of them can and will be resolved. Best wishes to you in your tour." May I remark upon the simple tribute and sage philosophy of those few lines. They have been of great meaning to me. That, ladies and gentlemen, is somewhat indicative of the setting in which I have labored on your assignments in the intervening years. This is symbolic of the spirit of understanding I have found among medical men wherever I have sought to join them to the tasks of a secretarial function—the spirit which has contributed some measures of mutual accomplishment.

We undertake to report upon a full year, the first, during which all executive responsibility has devolved upon your headquarters office and its staff. We sense that there has been a persistent evaluation of our *modus operandi* and of our accomplishments. We may have been weighted as to administrative soundness. We hope we have disappointed no one and that we may have impressed some and merited the commendation of many. We have certainly striven to do the best job we could do.

Certainly President McMillan's summary and recommendations indicate the many facets of activity in the interest of your Society. In most of these we have had an humble part. Undoubtedly he will have challenged us to do more, and we stand ready to assume the administrative tasks which lie ahead.

We measure some of our activities by the following tangible evidences which have been accumulated over the year since our last report—particular reference being made to the period April 8, 1950, to April 19, 1951:

Incoming pieces of processable mail	10,671
Letters, personal and general, dispatched	23,780
Telephone communications (local and toll)	1,469
Telegrams (dispatched)	177
Reports (formal, miscellaneous, agenda, transmittals and memoranda)	215
Review of literature (publications, brochures, bulletins, legislation, pamphlets, and reports from other associations, A.M.A., and sundry agencies.)	1,188
Personal conferences (Society officials, other officials, agencies, and persons.)	536
Meetings attended (official, public, regional, and national.)	148
Public speeches	9
Releases to press	8
County Society meetings	9
District Society meetings	5
Regional and National A.M.A. meetings	5

It may be noted that our general mailing for the year was considerably diminished as we assumed no action on purely public relations procedures, which accounted for a great deal of our mailings of 1949-50. However, the nature of the mail production this last year was markedly more exacting in its development.

It is of significance to remark upon the membership level of 2501 attained in 1950—a 37 per cent gain in five years—and the all time high for the Society. As of May 2, 1951, the membership, in



good standing, stood at 2243 and one may well predict that 1951 will again mark an increase despite the loss of deceased members and some fluctuation due to the national emergency (Korean).

One can justly point with pride to the effort placed on matters related to the maintenance of safe and sound health laws and public policy toward medicine within our state. The 1951 General Assembly became notable for the introduction of legislation having potential and profound influence upon the standards for health care in the state and upon the practice of medicine. It was negative legislation in the truest sense and, but for valiant effort and eternal vigilance on the part of all responsible sources in the medical life of the state, many of these bad proposals might have become law. We claim a dutiful and effective effort for headquarters office, while paying tribute to cooperative responses we experienced on the part of busy practitioners at home. To call the roll of titled bills failing of passage: Chiroprody, Naturopathy, Chiropracty, Optometry, Pharmacy Clerk Licensing, and practical nurse "grandfathering," all tending to lower standards of medical care and supervision of the health needs of the people, is to but scarcely recognize the import of each of these bills. Moreover, the limited transfer of hospital care funds from the Medical Care Commission, the enactment of a physical therapy registration, optician registration, and stream pollution control; were positive programs in which medicine inclined its influence with success. Definite progress was made in establishing an effective Coroner System and the educational result will surely bear fruit. In line with the Society's direction, with legal advice, and with the Legislative Committee's command, we devoted effective time and effort in helping terminate all of these legislative questions in a manner suitable to the interest of the public health. In this course, I know physical effort was exerted beyond the reasonable call of duty. We must think seriously of plans and educational means of assuring advanced effort for future terms of the General Assembly in order that one's existence may be safeguarded as well as legislative needs accomplished.

There is no great amount of individual excitement about national legislative details, though the import often is greater and the impact on medicine much more grave. Nonetheless, your headquarters office bears the brunt of this influencing effort of your Society. And our accomplishments appear equally of value to you. The fringe Acts of your Federal Government constitute the more dangerous laws to medicine, if enacted, to say no less of executive directives such as Reorganization Plan #27 under which the President sought to gain by executive effect what the Congress clearly rejected as public policy. Your executive secretary is fully accountable under the Federal Lobby Act and a great deal of effort must be exercised in a concise accounting of these particular activities in order to report to the congressional bodies without incrimination.

We have endeavored to make a real contribution in facilitating the work of your committees. We have gained increasing confidence in service to these and we sense a share of real responsibility in this area of activity.

Demands have been heavy for participation in consultations of allied agencies and programs. We have endeavored to be helpful, public relationswise, in this respect and have sensed a growing burden in making this contribution for the Society. We shall continue such efforts more in proportion to the other vital operations of the Society.

We again report the ultimate in cooperation from the editorial office of the *Journal*. In the resignation of Mrs. Catherine Jackson in September, we anticipated some difficulty in schedules and, of

course, greater details on the editor's shoulder. However, the editor had exemplified the remarkable foresight of having unobscurely trained another, Miss Louise MacMillan, who has fitted in as assistant editor admirably. The advertising in the *Journal* is on a par with the previous year and the revenue prospects appear sound and in line with the budget. However, rising costs in supplies and labor bid well to cause our expense in the production of the *Journal* to rise during the year.

As business manager of the *Journal*, I submit the following statement of income and disbursements January, 1950 to December, 1950.

#### Journal Budget:

Publication .....	\$17,000.00
Cuts .....	500.00
Salary Editor .....	1,800.00
Salary Assistant Editor .....	2,100.00
Office Expense—	
Editorial Office .....	400.00
Office Expense—	
Business Manager's Office .....	300.00
Equipment—	
Business Manager's Office .....	200.00
Travel Expense—	
Journal Business (local and national)....	200.00
Taxes, Social Security .....	39.00
Refunds—subscriptions .....	75.00

Total Journal Budget .....\$22,614.00

#### Receipts:

Medical Journal Advertising .....	\$16,081.65
Journal Subscriptions and Journals Sold..	247.70
Sale of Roster .....	197.75
Reimbursed cost of cuts .....	451.26
Appropriated by the Society .....	5,636.74

Total Receipts .....\$22,716.10

#### Actual Disbursements:

Publication .....	\$17,716.35
Cuts .....	430.67
Salary of Editor .....	1,800.00
Salary of Assistant Editor .....	2,100.00
Office Expenses—Editor .....	384.49
Office Expense—Business Manager .....	162.88
Social Security Taxes .....	58.56
Refunds .....	63.15

Total Actual Disbursements .....\$22,716.10

#### Expenditures:

In excess of budget .....	102.10
Receipts above expenditures—nil	

In this hour of great uncertainties, we face another year, giving up old goals and generating new ones. We ask Divine grace and blessings as we turn toward this new horizon and earnestly bespeak patience in these emergent times. There is much work for all hands, and there must be an understanding with a lasting spirit of "giving and taking" in relation to the pressures which inevitably accompany an era such as we now experience.

May God shed his love and grace upon each of you and may you stand up and be great men in this grave hour for our people. We of your headquarters office shall proudly march and serve with you.

**President McMillan:** You have heard the reports. First the constitutional secretary.

**Dr. James H. McNeill:** I move the report be accepted.

[The motion was seconded by Dr. Charles F. Strosnider, put to a vote and carried.]

**President McMillan:** The report of the executive secretary.

**Dr. W. A. Sams:** Mr. Chairman, I move you, sir, that we accept the report of our very able executive secretary, which I think is a very thorough report.



[The motion was seconded by Dr. B. O. Edwards, put to a vote and carried.]

**President McMillan:** The report of public relations director.

**Mr. LeRoy H. Cox:** Mr. President and Members of the House of Delegates:

With the passage of a year, we find that the public relations office now has had an opportunity to meet and know the doctors of the state and also to devise and develop a program of activity. At the outset, it would be well to thank publicly all the doctors, who by their guidance and suggestions have contributed to the establishment and continuance of this department. For without their help and moral support the task would have been much more difficult, particularly during the first full year of operation.

In creating your program, we have kept well in mind that any plan of operation in medical public relations must have as its bedrock truth and service; for without those basic qualities, our efforts would degenerate into mere defensive and egocentric petty propaganda. With a foundation of truth and service, public relations attains meaning and character, and becomes a springboard for future accomplishments. To do this effectively is not a task circumscribed by the element of time. On the contrary, it has as its principal portion time itself.

Then too, it has been our purpose from the start to project public relations with dignity and reserve. We believe this concept to be basic. It is impossible to disassociate procedure, policy, and technique from the unit or group concerned. Any program of public relations for medicine should be pitched to the high plane representing the intelligence and tenor of the doctors themselves. Any public relations activity should be tailored to suit the client. We have attempted to do just that.

There is a great deal of difference between the projection of public relations for a professional group and the implementation of public relations for a business. The medical profession has long stood as a symbol of these qualities of dignity and service. As such, it should be ever on guard to keep its standards of public relations on a level commensurate with its ideals.

For you, therefore, we have striven to establish a program of truth and service, projected with dignity and reserve, as the basis of our endeavor. With these characteristics as our hypotheses, we have made an honest effort to benefit organized medicine in North Carolina.

Our program is a continuous and continuing effort. We knew full well that it would be impossible to please everyone. Here, we were not unmindful of the Herbert Bayard Swope statement that a perfect formula for failure is a concerted effort to please everybody.

Nevertheless, we assumed, and I hope correctly so, that our mission should be directed toward laymen and lay organizations. For we believed that the physicians of the state were in favor of the retention of the private practice of medicine. That being the case, we took stock of our needs and of possible means of approach.

There are four basic means of reaching the general public, and we have attempted to utilize all four of the possibilities to the greatest extent. These are the motion picture, radio, the printed page, and the spoken word.

In looking at the public which was ours, we divided laymen into two large groups—first, the reading, listening, and discerning men and women of our state; and secondly, those who seldom read the printed page, who rarely listen to the meaningful spoken word, yet who are very surely a part and parcel of those who determine the thinking and action of North Carolina.

For this latter group, we secured a motion picture film entitled, "To Your Health," to be shown in commercial theaters. This particular motion picture attempted to portray the types of individuals in towns throughout the country who were in favor of statism or compulsory health insurance, as compared with those who believe in free enterprise as we know it in this country.

This picture, according to our records, has been shown in 150 theaters in North Carolina to 110,645 paying customers. We think this has had a part in telling our story.

We also have procured 16 mm. motion picture films dealing with the progress made by the medical profession and what this progress has meant to the "man on the street." These films have been placed at your disposal and have been used widely for showing to Rotary, Kiwanis, and other civic clubs.

In an effort to make use of radio as a means of public relations, we have distributed approximately 30 programs to county societies for use over their local radio stations. From all reports, the reception of these programs has been acceptable.

We cannot stress too highly the beneficial results which we feel can be engendered through talks to lay organizations and the presentation, on an intelligent and adult level, of the story of medicine. It has been our pleasure to render aid in the preparation of speeches to be delivered by others to these organizations. It has further been our privilege to speak to veterans' groups, service clubs, women's clubs, schools, and, of course, to medical societies and Auxiliary gatherings.

I believe each of us recognizes the inestimable value of the press in presenting our story to the public—not only because of its wide scope of readership, but also because of the power wielded by the editorial page. We have attempted to make our news releases interesting and informative, hoping thereby to let the public know of the unceasing work which medicine is doing in its fight against disease and suffering. And we have further endeavored to establish friendly relations with editors and staff writers of these newspapers, for in them we can gain a vigorous ally or an unremitting foe.

In our effort to create or cement good working relations with the press and radio, we have constantly recommended press-radio-physician dinners to be held in the county societies. To illustrate the potential value of such a project, I should like to include here a few remarks about one such dinner recently held in one of the larger cities of North Carolina. There were approximately twenty doctors, newspapermen, and radio executives at this particular gathering, which was sponsored by the members of the Public Relations Committee and the Executive Committee of the County Society. After dinner, there followed a discussion aimed at determining ways and means for the medical profession and the various news agencies to render mutual service. Progress toward an understanding, working relationship was realized. One newspaper editor stated that this meeting was one of the most forward-looking gatherings he had ever attended in his twenty-five years residence in North Carolina. Only results beneficial to each group can come from such a conference.

We have reasoned that public relations is an ever-repeating process. We must forever tell our story, for new faces will appear who have not heard the story that medicine has to tell. We thought of the youth of our state who will, in the next two decades, make the laws and customs of our land. They should hear what we believe is a fundamental story of America. As a result, we continued and further amplified the high school essay contest.



Our contest this year was conducted in cooperation with one sponsored by the Association of American Physicians and Surgeons, and in this connection kits of reference material were dispensed to approximately 1064 high schools in the state to become the permanent property of their libraries. For the first time, we noticed widespread interest on the part of the county societies in establishing contests and awards of their own. This, of course, tended to increase the general interest of high school students in your State Society contest. Entries this year increased by almost 30 per cent over the previous year and we believe that the essays themselves, by and large, were of much better quality.

At the First General Session on tomorrow, Joe Baxter Roberson of Candler, who placed first in the contest, will read his paper and will receive, as an award, a \$600 scholarship payable to any college or university to which he is eligible and which meets the standards of the Southern Association of Colleges and Secondary Schools.

Mr. Roberson's paper, together with those of the second and third place winners, has been forwarded to the headquarters of the Association of American Physicians and Surgeons, for competition in their nationwide contest. On Friday afternoon, I received word from the executive secretary of this Association in Chicago that Roberson placed second in the entire nation in their high school essay contest. He will receive a check for \$500 as second-place winner. [Applause]

An event which we feel to be worthy of mention is our fourth statewide public relations conference held in Raleigh on December 14, 1950. We were very fortunate to secure as our speakers four men outstanding in the field of public relations: Mr. William H. Neal, senior vice president of the Wachovia Bank & Trust Company, Winston-Salem; Mr. Joseph M. Bryan, first vice president of the Jefferson Standard Life Insurance Company, Greensboro; Mr. Edgar J. Forio, vice president of the Coca-Cola Company, Atlanta; and Mr. Loyd J. Kiernan, special studies manager of the public relations office, Association of American Railroads, Washington.

Each of these men is an authority in his field of operation. It is our opinion that our program was both interesting and beneficial to all physicians who attended. Mr. Forio, as you may know, is scheduled to speak to the entire membership of the Medical Society at the Second General Session on Wednesday. I hope that each of you will hear him.

In the concentration of our efforts toward the lay citizen, we wished to provide opportunity for organization in our state to give tangible expression of their feelings toward the private practice of medicine. Our drive for resolutions opposing compulsory health insurance was both heightened and expanded. Starting with but twelve in March of 1950, we today have on record 210 formal resolutions, from varied types of organizations and from all sections of North Carolina. To give an alpha and omega of this wide range, we could well point to the American Legion and the Wednesday Afternoon Study Club. We think this is important, for it shows that we are reaching a representative cross-section of our population.

We should like to take this opportunity to extend our whole-hearted thanks to the Auxiliary to the Medical Society for the splendid task they have done during the past year to aid this office in securing these resolutions. Their excellent cooperation has contributed immeasurably to the success of our drive. In our opinion, our association with the Auxiliary has been one of the most pleasant experiences of the past year.

We have strongly advocated the establishment of Medical Emergency and Referral Centers in the

county societies as needed. In this connection, we think you may be interested to know that only recently a Physicians' Exchange has been established in one of your county societies to provide 24-hour medical service to all persons living in that area. We sincerely feel that this one move will bring many accolades upon the doctors of that community, and that no more appropriate means could be found for creating good public relations. This is true service, rendered with dignity and reserve.

Other projects which have been mentioned to county societies from time to time are organization of personnel in physicians' offices, speakers bureaus, and the devotion of one meeting a year in each county society to public relations. This latter we believe to be extremely important.

Your public relations office has always endeavored to give the fullest cooperation and aid to the activities of the American Medical Association. During their recent advertising campaign, this office solicited advertisements from a cross-section of the larger industries and corporations in the state. Records indicate that numerous advertisements were secured, partly or wholly through the work of your public relations office.

We have made a special effort this year to meet and know as many as possible of the members of the State Society. We have talked with 388 physicians in their offices during the last twelve months and have received with interest the comments and suggestions made concerning our public relations program.

In order that we may keep you informed of the activities of the public relations office and pass on to you items of interest, we have prepared each month and mailed to every member of the State Society a public relations bulletin. We hope that this publication has been of interest and help to the doctors of North Carolina.

Through this bulletin and by other means, we urged each member of the Society to exercise his constitutional right of franchise in the recent statewide election.

We have attended seven meetings of state society committees. We have made a total of thirty-six speeches. We have attended fifty-one meetings of other organizations, both medical, nonmedical, and military, and have spoken to twenty-two of these. We have been present at the functions of twenty-three county and district societies, and auxiliaries to county societies; of these, we have spoken to fourteen. We have had conferences with representatives of forty-six organizations.

Since our last annual report in May of 1950 at the 96th Annual Session, we have mailed 1650 letters and have made 2189 telephone calls, both local and toll. Throughout the year, we have made a study of 603 pertinent publications.

Our bulk mailings have consisted of 38,088 articles. These include:

Public Relations Bulletins .....	29,340
News releases .....	3,080
Sample resolutions opposing compulsory health insurance .....	280
Socialized medicine kits to state, district, and county society officers .....	287
Transcripts of public relations conferences.....	706
Radio programs .....	30
Routine letters .....	1,159
Notices of December conference .....	778
Notices of 1951 essay contest .....	1,275
Packaged libraries to schools .....	1,064
Miscellaneous .....	89

Now to the future. We have for a long time felt that every phase of activity of the Medical Society cannot help but reflect the tenor of the public relations of medicine. Our aim is simple and direct. By the many facets of our program, we hope to



re-emphasize, beyond a reasonable doubt, that medical progress is predicated upon the individuality of thought and endeavor found always in the private practice of medicine.

Regarding our projected program, we plan the continuation and expansion of the public relations bulletin, for we feel that this is, in effect, a monthly report to every doctor concerning the public relations program. We think well of the continuation of the high school essay contest, in whatever form you see fit. We believe that this is the soundest way to reach the youth of today, the voters of tomorrow.

We wish to meet and know more and more of the physicians of the state, and we welcome any suggestions which they may have concerning our program.

We wish to continue our cooperative efforts with the American Medical Association; we seek the establishment of more effective working relations between state, district, and county public relations officials; and we intend to give full cooperation and assistance to related committees of the Society.

We wish to expand the use of motion pictures as an effective public relations tool, and we are already formulating plans for greater use of radio.

We hope to stimulate sympathetic interest on the part of the organizations outside the medical profession and thereby strengthen our drive for resolutions opposing compulsory health insurance.

We strongly desire the furtherance of cohesive working relationships with the Auxiliary to the Medical Society.

We wish to determine by established procedures, the attitudes of the general public toward the medical profession.

We wish above all to take advantage of every opportunity to speak to lay groups in our state. We feel that this is one of the best ways for us to present the story of medicine to the public and we are further convinced that we will be able thereby to make more friends for medicine and for the way of freedom in America. Thank you. [Applause]

**President McMillan:** You have heard the report of our public relations director.

**Dr. Watson Wharton:** Mr. President, I move we accept the report.

[The motion was seconded by Dr. Holbrook, put to a vote and carried.]

**President McMillan:** Gentlemen, at this time for the first time in the history of the House of Delegates we are to have a report from the Women's Auxiliary. We are very happy to welcome the President of the Women's Auxiliary of the Medical Society of the State of North Carolina, Mrs. Harry L. Johnson.

**Mrs. Harry Johnson:** As president of the Auxiliary to the Medical Society of the State of North Carolina, I beg to submit the following report:

Up to date, we have 1400 members. This includes only two members-at-large. Since most of these members renew at their annual convention, we expect to have quite a few more before the meeting is over.

The following counties have Auxiliaries:

1st District, 1 Auxiliary. (Since I came to this meeting, I have learned Elizabeth City has also organized an Auxiliary.)

2nd District, 6—Beaufort, Carteret, Craven, Lenoir, Martin-Washington-Tyrell and Pitt. Three unorganized.

3rd District, 3—Columbus, New Hanover-Brunswick-Pender and Sampson. Five Societies have no Auxiliaries.

4th District, 6—Green, Edgecombe-Nash, Halifax-Northampton, Johnston, Wayne and Wilson. Two unorganized.

5th District, 7—Cumberland, Harnett, Hoke, Lee, Moore, Robeson and Scotland. Richmond did not

reorganize this year. Two others are not organized.

6th District, 3—Caswell-Alamance, Durham-Orange and Wake. Five do not have Auxiliaries.

7th District, 2—Gaston and Mecklenburg. Eight are unorganized.

8th District, 6—Forsyth, Guilford, Rockingham, Surry-Yadkin, Wilkes-Alleghany, Watauga-Ashe. One unorganized.

9th District, 5—Burke, Caldwell, Catawba, Iredell-Alexander, Rowan-Davie. Davidson did not reorganize this year, leaving two unorganized.

10th District, 2—Buncombe and Mitchell-Yancey. Ten unorganized.

We regretted losing Davidson and Richmond, which have not been active for some time, but we were very pleased to welcome Catawba, Watauga-Ashe, and Sampson since the convention last year.

The above shows that there are many counties which have no Auxiliaries. It is true that some of these have only a few doctors, and that many of the counties have members-at-large. It is hoped that with encouragement from the medical societies in those unorganized counties we shall have more Auxiliaries soon.

May I say here that I am making this report quite full in order to acquaint the members of the Medical Society with the many phases of Auxiliary work since this is the first time we have had an opportunity to report to you.

Immediately following the convention in 1950, vacancies on the Board were filled and as soon as this was completed, names of the officers, chairmen of committees, district councilors and county presidents were sent to the state office of the Medical Society of North Carolina, the National Auxiliary Office and the Public Relations Office of the A.M.A.

Early in the year letters of instruction were sent to these officers, et cetera, and each was furnished with a copy of the Constitution and By-Laws of the Auxiliary, a yearbook and the National Handbook.

On September 26, 1950, a Board meeting was held at the home of Dr. and Mrs. H. Stuart Willis of McCain at which time we were honored with the presence of five representatives of the Medical Society: Dr. Roscoe McMillan, your president; Dr. Willis, our host; Mr. James T. Barnes, the executive secretary; Mr. LeRoy Cox, director of public relations; and Dr. Rachel Davis, chairman of the Advisory Committee, to whom we are greatly indebted for her counsel and encouragement, and for the annual award of \$25 and the Davis Cup which goes each year to the district doing the most outstanding work.

At this meeting instruction was given by the committee chairmen and officers so that the county presidents who attended would be more familiar with the purpose and plans of the Auxiliary. Minutes of this meeting were mailed by the recording secretary to the Board members.

Our Auxiliary supports a bed in each of the three State Tuberculosis Sanatoria. Fifty cents of the dues paid annually by each member goes for the upkeep of the beds. Endowment funds are being built up through special gifts so that these beds will be guaranteed permanent support.

The McCain Endowment Fund has been completed. However \$31 was added to it this year. The Stevens Bed Endowment (this bed is at Black Mountain) we hope to complete soon—\$370 was added to it this year. The Cooper Bed Endowment, our newest, which is at Wilson, is increasing. With extra emphasis \$1,088.35 was added to that fund. During the year these patients are remembered with magazine subscriptions, gifts, greetings and messages. These beds are for the use of nurses, doctors or members of their families who have tuberculosis. The occupant of the McCain Bed, Dr. W. B. Toms, was dismissed in March and it is now



occupied by a nurse, Mrs. Mildred Kea Furmage of Goldsboro.

During the first part of our year the Stevens Bed was occupied by Mrs. A. W. Ramsey, a graduate of Duke University School of Nursing. Since February we have had as our guest Dr. James Donnelly of Winston-Salem.

Dr. H. E. Brooks who was occupying the Cooper Bed was discharged in March, and since then there has been no request for this fund as far as I know.

We also have a Student Loan Fund to be used by sons or daughters of the medical profession. It was increased by \$208.50 this year. There have been no calls for loans.

There is much interest in campaigns for nurse recruitment, with scholarships being offered by three county Auxiliaries, Lenoir, Johnston and Burke, and one by the past state presidents.

Learning of the very low percentage of doctors who vote, the Auxiliary members were active in getting every eligible member of the doctor's family to register and vote in the fall elections. Some members also used their cars to take voters to and from the polls.

The interest in public relations has been most gratifying! May I at this time express gratitude to Mr. LeRoy Cox, your director of public relations, and other members of the Medical Society for the guidance and inspiration which they have given us. I am sure we have never before been so aware of the need for this type of work. Programs to promote good public relations were carried on in many ways.

Some of the Auxiliaries had teas, et cetera, and invited representatives from various civic clubs and organizations and featured some good public relations speakers. At this time they also stressed education against compulsory health insurance and encouraged those present to have their groups sign and send resolutions, as prepared by the Medical Society, against this type of political medicine to their congressmen, et cetera.

Some members chose to present the resolution to their clubs personally, while others preferred to present them through an interested friend who was well informed.

Whatever the method used, I am proud to tell you that signed resolutions were sent to congressmen, et cetera, from 387 clubs and organizations through the auxiliaries' efforts. Buncombe County has distributed 200 resolutions to clubs, et cetera. Since I have come here, I have learned that of the 200 circulated in Asheville by Buncombe County, fifteen were not signed, for various reasons. Some of the clubs said they were not allowed to sign this sort of thing and others were against the idea and these names were handed to the Medical Society to be answered and for re-education; but that left 185 who did sign the resolutions, bringing those for which the Auxiliary was responsible to 572.

With the above program, information was also given regarding Voluntary Health Programs. I must mention Edgecombe-Nash Auxiliary, which was responsible for distributing 2,000 pieces of educational literature in barber shops, beauty parlors, rural stores, bus and train terminals, and places too numerous to mention. The other members of the 4th District were responsible for placing another 1,000.

There was a real awareness that each doctor's wife is a representative of good or bad public relations for the medical profession.

It is also our aim to someday place the magazine *Today's Health* in every physician's and dentist's reception room, all school libraries and as many beauty parlors, et cetera, as possible. We emphasize beauty parlors, because when women are under driers, they will read anything that is within their reach, and we feel if they get it there, we will get

some good publicity.

There has been a considerable increase in the number of subscriptions this year, with Wayne County receiving a national award for their work, a set of very fine educational records for the work they did. However, our reports show schools receiving only thirty-five subscriptions through the efforts of Auxiliaries. We feel we are missing a very fine opportunity for health education by not having it in more libraries. I am wondering how many of you are familiar today with the magazine *Today's Health*. It is the magazine that replaces *Hygeia*, and it is one of the best public relations things you have, if you but knew it. It has splendid articles; one this year on "Your Doctor Is Human" was priceless, and if you don't have it in your office, I hope you will help us get it out where the public can read it. You know it is published by the American Medical Association. It is their publication for the laymen and it should be used more extensively.

Members were asked to continue the project of placing a copy of Filde's picture "The Doctor" in reception rooms of hospitals and doctors' offices or some place where it could be seen readily by patients and those interested in them, so that they may be reminded that in this day of specialization and hospitalization the doctor is still very near and very much concerned about his patient. One hundred and forty-nine additional copies have been hung.

All of these projects have the approval of the State Medical Association.

Members have taken their places in almost every conceivable club and organization. It would seem that every phase of service has been represented, covering all the usual drives, cancer, polio, et cetera; many branches of Red Cross work, scouting, even care in county homes and going into rural homes to give instructions and medications and furnishing book carts and playrooms, and working in various clinics.

We have appreciated our association with the Auxiliary to the Southern Medical Association, and when I represented North Carolina at their annual meeting in St. Louis I was pleased to learn that we placed second for the amount which we contributed toward the Jane Todd Crawford Memorial Fund, which is a loan fund to be used for post-graduate study in obstetrics and gynecology; and that because of our observance of Doctor's Day we were third among the Southern states. We are honored to have one of our members, Mrs. A. L. O'Briant of Raeford as historian for the Southern Auxiliary.

As president of the North Carolina Auxiliary, I have sent out material which I thought might be helpful and have attempted to carry on my duties as they came to me.

I visited and spoke before three district meetings of the Auxiliary (2, 3, and 8), and ten county meetings (Catawba, Mecklenburg, Wayne, Johnston, Cumberland, Forsyth, Guilford, Surry and Wilkes-Alleghany.) A talk was also made before a combined meeting of the doctors and their wives in Watauga-Ashe, and I am delighted to report them as our newest Auxiliary. Much credit for organizing this goes to the interest of Dr. H. B. Perry of Boone. If we had doctors in all of our unorganized counties as interested as he is, I am sure we would soon be a 100 per cent organization.

I also had the unique experience of talking to a group of medical students' wives in Chapel Hill. They are very eager to become good wives for their future doctors.

I accepted invitations to the state meeting of the American Cancer Society in Durham, also brought greetings to the 8th District meeting of that group in Asheboro in March and noted with pleasure the



friendly relationship between that organization and the medical profession.

I attended a part of the Fourth Annual Public Relations Conference in Raleigh and since I was unable to attend the entire program I am particularly grateful to the office of Mr. Cox for a transcript of the entire proceedings.

At the invitation of Mr. Russell Grumman, president of the State Congress of Parents and Teachers, I attended several of the sessions of their annual meeting at Winston-Salem in April.

It was also my privilege to represent North Carolina on a panel discussion on "Organization" when I attended a two day Board meeting of the National Auxiliary in Chicago last November. This entire meeting was full of inspiration and information.

Four articles have been written for the Auxiliary page in the *North Carolina Medical Journal* and assistance given the chairman of Press and Publicity in getting out three bulletins to the members.

Over 400 letters have been written (not including those which were mimeographed), more than 4,800 miles have been covered in the interest of the Auxiliary. Numerous telephone calls have been made.

Cooperation within the Auxiliary has been wonderful. Without it I could not have made this report.

The year has been a busy one, full of many pleasures and privileges that would not otherwise have come my way, but not devoid of disappointments. We wish to stress that while women are very busy with many other organizations, which draw their membership from the wives of the butcher, the baker and the candlestick maker and many others, our Auxiliary has only one course—the doctor's wife, therefore we need every one of them in our work.

We are very grateful for the fine cooperation of the officers and members of your Medical Society as a whole and to Mr. Barnes and Mr. Cox and their efficient staffs in Raleigh.

I am truly grateful too, for this opportunity to bring before you some of the accomplishments of the Auxiliary to the Medical Society of the State of North Carolina.

[The audience arose and applauded.]

**President McMillan:** Mrs. Johnson, on behalf of the Medical Society of the State of North Carolina, I am sure I speak for its members when I say how grateful we are to you for your helpfulness in carrying on this wonderful work in the Auxiliary.

**Dr. B. O. Edwards:** I move we accept this report with thanks to Mrs. Johnson for coming here personally and making the report.

[The motion was seconded by Dr. L. R. Hedgpeth, put to a vote and carried.]

**President McMillan:** Next we come to the recognition of visiting delegates, I am going to ask Secretary Hill to recognize the visiting delegates.

**Dr. Hill:** Recognition of the delegate from the North Carolina Dental Society, Dr. Glenn L. Hooper of Dunn.

**Dr. Glenn L. Hooper:** Dr. Hill, Mr. President, Members of the North Carolina Medical Society, Distinguished Guests, Ladies and Gentlemen: It is a distinct pleasure for me to meet with you, a group of men for whom I have the highest regard. It has been my pleasure to know quite a few of your members, not only to know them but to work with them in our common cause.

It is my pleasure to be a member of the Medical Advisory Committee of the North Carolina Hospital Board of Control, and it has been a privilege to work with your representatives on that committee.

I bring you greetings from the North Carolina Dental Society, 910 men working in this state for the things that you are for. We want to cooperate

and work with you in endeavors that we have in common. We are interested in the public health program that is your consideration and ours. As a state organization, we are 100 per cent behind the program as evidenced by the fact that one of our members, a member of our state legislature for the past two sessions, has worked with your members in those sessions for the things that you are interested in to which your president referred in his message.

In our Dental School, organized this last fall at the University, we have forty dental students this year. It is the first year and they have a distinction that no other students will ever have. We are thankful to you for the work that you did in helping to get that dental school, along with the medical school, because we realize the necessity for more practitioners of dentistry in North Carolina.

We also are interested in public relations with the laymen and the laywomen of our state. We have a Public Relations Committee, and we want to assure you that we want to cooperate in every way with you and in all other things that affect your Society and your practice as well as our Society and our practice.

It is a pleasure to be with you and I extend to each of you a cordial invitation to attend any of our meetings wherever they might be. [Applause]

**Dr. Hill:** Thank you, Dr. Hooper, for this message. You certainly can depend on us for cooperation.

**President McMillan:** Gentlemen, we now come to the reports of the Councilors and committees. I am going to ask the secretary to distribute the reports and I am going to say, in order to facilitate the deliberations of this body, that the annual reports of each Councilor, each committee, and certain Boards of the Society were submitted as of March 1, 1951. All these reports were compiled and submitted to all the delegates in advance of this meeting. You have now had the opportunity to review those reports, digest them and consider what action you would like to take upon each of them. The Executive Committee has carefully reviewed each report. It has been suggested now that each report be read by title and that the chairman be recognized for the purpose of supplementing or elaborating on his report, and that each chairman recommend the disposition of the report. There should be full and free discussion of any and all of the reports. Following your action here, of course, all reports will be published in the August issue of the *North Carolina Medical Journal*. Is that perfectly clear to all you delegates? What is the will of this body? Shall we proceed in this manner or shall we have all the reports read?

**Dr. Forest M. Houser:** I move that we proceed as you have outlined.

[The motion was regularly seconded, put to a vote and carried.]

**President McMillan:** We now proceed to the reports of the District Councilors.

#### Report of First District Councilor

The First District Medical Society held regular quarterly meetings at Elizabeth City April 14, at Edenton May 19, at Ahoskie November 1, and at Windsor December 13. Scientific papers were read and discussed. A business session was held at each meeting. Three new members were investigated and admitted to the First District Medical Society during the year.

In addition, during the year, the First District Medical Society sponsored a series of Post Graduate Medical Lectures presented by the Extension Division of the University of North Carolina, School of Medicine. All meetings were well attended.



There have been no irregularities reported in the district during the year.

Respectfully submitted,  
Z. D. OWENS, M. D.

#### Report of Second District Councilor

The following is annual report of the Second District:

The annual meeting of the Second District was held in Morehead City last spring, the Carteret County Medical Society serving very ably as host. It was a splendid meeting, well attended, and was preceded by a directed tour of the Cherry Point Marine Corps Air Station which proved very instructive.

In visiting the various societies, it is apparent that the majority of doctors are most alert to the fight against socialized medicine. Most of the societies are well organized and active.

It might be worthwhile noting the fact that, if an irregularity in the practice of medicine is reported to the Councilor, his report of the matter to the Board of Medical Examiners is futile unless the local medical society concerned requests that an investigation be made. The complaint must be made from the local society level, according to the by-laws.

ALBAN PAPINEAU, M. D.  
Councilor

#### Report of Third District Councilor

The Third District has had a very succesful and uneventful year under the direction of Dr. V. R. Small of Clinton, President.

The Fall meeting was held in Clinton which was very well attended. A Spring meeting is planned, but has not been held. Therefore, there has been no election of officers for the ensuing year.

The only irregularity occuring in the district during the year was the revoking of one physician's license by the Board of Medical Examiners for violation of the narcotic law.

Respectfully submitted  
DONALD B. KOONCE, Councilor  
Third District

#### Report of Fourth District Councilor

The respective county societies of the Fourth District are active and hold regular monthly meetings. They are on the alert, and are cooperating with the Civil Defense program. Two of the smaller populated counties do not have regular organizations, but in these counties most of the doctors participate with the adjoining counties.

The Fourth District Society continues to have its quarterly meetings, meeting with different county societies over the district. This proves to be very effective in keeping the district organization a close-knit unit as well as affording an opportunity for excellent scientific programs.

A new wing to Eastern Carolina's TB Sanitorium at Wilson was dedicated February 18th, and opened for patients. This increases the capacity by 114 beds, giving the entire institution 314 beds. Excavation also has begun for two additional wings.

This has been a very successful year with an excellent spirit within the profession, and no ethical nor criminal violation reported.

BAHNSON WEATHERS, M. D.

#### Report of Fifth District Councilor

The first district meeting of the year was held in the East Laurinburg school auditorium (the Scotland County Medical Society being the host) on December 14, 1950, at 2:30 P. M. An excellent afternoon program was carried out by four visiting speakers and the attending group of fifth district members thoroughly enjoyed the scientific program.

Several problems have arisen within various county medical societies during the year but have all been handled at a local level and in a most excellent manner. I hasten to congratulate the local county societies for their ability and willingness to take care of these problems. The various counties within the district have all gone wholeheartedly into the defense program, and, I believe, are cooperating with Dr. Kitchen's committee in a fine manner.

The Fifth District's most outstanding example of the corporate practice of medicine was settled peacefully by the local group and it is your councilor's desire that all other cases may be settled during the year 1951.

This office has furnished information about various doctors and hospitals to the American Medical Association, State Board of Medical Examiners, and the State Society when requested.

Other than that activity within the district itself has been extremely light during his fiscal year.

Respectfully submitted,  
HUGH A. McALLISTER, M. D.,  
Councilor, Fifth District

#### Report of Sixth District Councilor

It is with pleasure that I report that there has been substantial peace and harmony within the profession throughout the Sixth Medical District during the past year. The County Medical Societies have been active and the District Society held one meeting during the fall which was educative and enjoyable.

Two minor complaints involving the relationship of members of the profession to patients were directed to the attention of the State Society Committee on Grievances and have been adequately and satisfactorily determined.

Respectfully submitted,  
ARTHUR H. LONDON, JR., M. D.  
Sixth District Councilor,  
Medical Society of the State  
of North Carolina

#### Report of Seventh District Councilor

Medical affairs have been harmonious in the 7th district for the past year. A good district meeting was held in Gastonia in the Fall. Dr. J. B. Johnston, Jr., is doing a fine job as Secretary-Treasurer.

There have been so many criticisms, some of them quite harsh, of high medical and surgical fees, especially specialists' fees, both by physicians and laymen, in my district that I feel compelled, as councilor, to make some public cognizance of it. Many of our physicians, including myself, feel that our public relations are being subjected to a severe strain by these high fees in some quarters. The feeling in this area is rapidly gaining favor that what a doctor charges his patient can no longer be considered his business only. There has been no official county medical society action on this matter so far that I know of.

Some of the policies of the State Vocational Rehabilitation Service have been the cause of much dissatisfaction among the physicians of my district, especially those in the smaller counties. The policy which has aroused the most protest is that requiring that all patients whose treatment is paid for by the Vocational Rehabilitation Department must be treated by a physician who does his work in a hospital of 100 beds or more. The Lincoln County Medical Society in its January meeting passed unanimously a resolution proposing that organized medicine in North Carolina make efforts to get a change of rules to the effect that physicians selected to treat Vocational Rehabilitation cases be chosen on the basis of professional skill without regard to the size of hospital in which they do their work.

This resolution was presented to the last meeting of the State Medical Society Executive Committee at Raleigh on March 11, 1951, and passed unanimously by that body.

Respectfully submitted,  
L. A. CROWELL, JR., M. D.  
Seventh District Councilor

#### Report of Eighth District Councilor

Nothing requiring action by the Executive Committee or the House of Delegates has occurred in this district during the past year.

J. H. McNEILL, M. D.  
Eighth District Councilor

#### Report of Ninth District Councilor

The Ninth District Medical Society had its annual meeting in Salisbury, N. C., on September 21, 1950. About one hundred doctors were present.

The meeting was opened by the President, Dr. Clyde R. Hedrick, of Lenoir, N. C. Dr. Lloyd Harvey Robertson then took the chair as president, and Dr. Bob Lewis Field as secretary. The following officers were named:

President-Elect—Dr. Jacob Harrison Shuford, Hickory, N. C.

Secretary-Treasurer—Dr. John Sumter Lewis, Hickory, N. C.

Visiting State Officers present were:

Dr. Roscoe D. McMillan, president; Mr. James T. Barnes, executive secretary. (The Medical Society of the State of North Carolina.)

The afternoon session was given to Scientific Program:

1. "Use of Banthine in the Treatment of Peptic Ulcer" by Keith S. Grimson, M. D., Professor of Surgery, Duke University Medical School, Durham, N. C.
2. "Radiological Aspects of Peptic Ulcers" by George J. Baylin, M. D., Assistant Professor Radiology, Duke University Medical School, Durham, N. C.
3. "Diseases of the Liver" by David Cayer, M. D., Associate Professor Internal Medicine, Bowman Gray Medical School, Winston-Salem, N. C.
4. "Acute Pancreatitis" by Kyle Black, M. D., Salisbury, N. C.

The above subjects were covered fully and discussed, and everyone appreciated the Scientific Program.

The Evening Meeting was a banquet, with Dr. Frank B. Marsh of Salisbury, N. C., as Toastmaster.

The next Annual Meeting will be held at Hickory, N. C., the last Thursday in September, 1951.

To my knowledge there is no mal-practice in the Ninth District. All Doctors are co-operating very nicely.

IRVING E. SHAFER, M. D.  
Ninth District Councilor

#### Report of Tenth District Councilor

This year has been a good year for organized medicine in our district. There is much harmony amongst our members, and whatever friction or discomfort there is, is local, and I feel sure can be ironed out with time.

We had our fall meeting of 1950 at the George Vanderbilt Hotel, Asheville, North Carolina, October 4, 1950, and there were 220 doctors in attendance. The program constituted the Symposium recently staged on an annual basis by the Buncombe County Medical Society and the Tenth District Medical Society. A very excellent scientific program had been arranged and very able speakers were brought to the Symposium, making this a very enjoyable occasion and a very interesting and educational pro-

gram. At this meeting we had the pleasure of having James T. Barnes, executive secretary of the Medical Society of the State of North Carolina, as our guest. At the evening hour of 7:00 a fine banquet was held and enjoyed by all.

There is some complaint in my District about Quacks, and others who are not licensed practicing medicine. However, I am hoping to get something done about this matter in the near future.

Our Spring meeting of this year met at Lake Lure, a famous resort hotel, and there was a good crowd at this meeting, which I was unable to attend because of my legislative duties. However, I have the report of the secretary and he tells me that their program there was fine and enjoyed by everyone.

All in all, I think we are all right in the Tenth District. Due to my illness, which struck on December 6, 1950, I have not been able to get around much among the fellows. However, I am now much better and hope to do a lot of visiting this summer and fall.

Respectfully submitted,  
W. A. SAMS, M.D.  
Councilor Tenth District

**President McMillan:** Gentlemen, you have heard the reports of the Councilors of all ten districts. What shall we do with these reports?

**Dr. W. T. McLaughlin:** I move that we accept them.

[The motion was seconded by Dr. C. F. Strosnider, put to a vote and carried.]

**President McMillan:** We will have the report on candidates for General Practitioner of the Year, Dr. William A. Sams, chairman.

**Dr. William A. Sams:** Mr. President and Members of the House of Delegates: Your Committee for the Selection of the General Practitioner of the Year for North Carolina met this morning and opened the files of all applicants. There were received and filed with the committee eight applicants, properly endorsed and well presented. Your committee studied these reports carefully and our unanimous recommendation is that you accept the following:

1. Dr. E. B. Lattimore of Shelby, in Cleveland County;
2. Dr. Henderson Irwin of Eureka, in Wayne County;
3. Dr. E. B. Beasley of Fountain, in Pitt County.

**President McMillan:** We will now proceed to vote on Dr. E. B. Lattimore, Dr. Henderson Irwin, and Dr. E. B. Beasley. The ballots will be distributed.

[Balloting]

**Dr. Sams:** Mr. President, the canvass of the ballots taken on the General Practitioner of the Year gives Dr. E. B. Lattimore 59 votes, Dr. Henderson Irwin 8, and Dr. Beasley 3.

**President McMillan:** I now declare Dr. E. B. Lattimore of Shelby elected General Practitioner of the Year.

Report of delegates to the American Medical Association, Dr. Strosnider, Dr. M. D. Hill and Dr. B. O. Edwards. This report has been filed, read, reported on, by the Executive Committee.

#### REPORT OF DELEGATES TO AMERICAN MEDICAL ASSOCIATION

The House of Delegates of the American Medical Association met in San Francisco, California, Monday, June 26-30, 1950, at 10:00 A. M., in the Concert Room of the Palace Hotel.

There were 196 of the 198 Delegates present at this meeting.

The three Delegates from our State Society were present and attended all sessions of the House:



Dr. B. O. Edwards, Asheville, N. C.; Dr. M. D. Hill, Raleigh, N. C.; and Dr. C. F. Strosnider, who served as Chairman of the Reference Committee on Reports of Officers and as a member of the Committee on Chronic Diseases.

The following business was transacted by the House on Monday, June 26, 1950.

1. Call to order by the Speaker.
2. Preliminary Report of the Reference Committee on Credentials.
3. Selection of recipient of Distinguished Service Award.
4. Speakers Organization remarks and the confirmation of appointments to Reference Committees.
5. Remarks by the President.
6. Report of Board of Trustees and Councils (These were lengthy reports covering works done during the past six months).
7. New Business—This included the introduction of numerous resolutions which were referred to the proper Reference Committees.

#### 2:30 P.M.

Executive Session to deal with private affairs of the Association.

#### Tuesday, June 27, 1950

This day left open for meetings of the Reference Committees.

1. Supplementary Report of Reference Committee on Credentials.
2. Reading and adoption of minutes.
3. New Business—Here more resolutions were introduced to the House.
4. Executive Session—Further transaction of private affairs of the Association.

Report of Reference Committees and other unfinished business.

#### Wednesday, June 28, 1950

House did not meet on account of the Reference Committees not being ready to report back to the House the numerous resolutions referred to them.

#### Thursday, June 29, 1950

1. Supplementary Report of Reference Committee on Credentials.
2. Reading and Adoption of Minutes.
3. Supplementary Report from Board of Trustees and other Reference Committees.
4. Election of Officers.
  - a. President-elect, Dr. John Cline, San Francisco, Calif.
  - b. Vice-President, Dr. R. B. Robbins, Arkansas.
  - c. Secretary-General Manager, Dr. George Lull, Chicago, Ill.
  - d. Treasurer, Dr. J. J. Moore, Chicago, Ill.
  - e. Speaker House of Delegates, Dr. F. F. Borzell, Philadelphia, Pa.
  - f. Vice-Speaker, House of Delegates, Dr. James R. Reuling, Bayside, N. Y.
  - g. Nomination for Standing Committees by Board of Trustees.
  - h. Roll Call for Casting Ballots.
  - i. Election of Honorary Officials and Associate Fellows.
  - j. Unfinished Business.

Comment: Report of the Board of Trustees—

In the year ending December 31, 1949, the American Medical Association membership responded to the voluntary assessment placed on it by the House of Delegates by remitting through their constituent State and Territorial Medical Associations the sum of \$2,289,858.23. Disbursements from this fund in the conduct of the National Educational Campaign amounted to \$1,613,812.78. The balance of \$676,145.45 unexpended on December 31, 1949, was placed

in reserve to meet further demands of the program.

Ordinary income in 1949 amounted to \$5,379,049.95 as follows:

Fellowship dues	\$ 73,560.00
Interest on Investments	153,857.12
Miscellaneous	9,336.43
Annuity Premium Refund	23,124.04
Periodical Subscriptions	2,457,644.56
Periodical Advertising	2,431,837.63
Books, Pamphlets, etc.	232,689.97

Total Ordinary Income .....\$5,379,049.95

#### Expansion of Washington Office

The Washington Office has been moved into much larger and better equipped quarters and the personnel also has been increased. At the present time Dr. Joseph Lawrence, Director, is assisted by two physicians, one lawyer, one staff writer, and one administrative assistant. The Washington office now occupies an entire floor of a new office building at 1523-L Street, N. W. We are now better prepared than ever to study and report our findings on all bills presented to Congress very soon after they have been introduced in Congress. We now have the personnel to keep Congressmen informed on important medical matters pending before Committees.

Respectfully submitted:

C. F. STROSNIDER, M. D.,  
M. D. HILL, M. D.,  
B. O. EDWARDS, M. D.,

Delegates.

#### Clinical Sessions

On Monday, December 4, 1950, in the Euclid Room of the Statler Hotel, Cleveland, Ohio, an interesting program was put on pertaining to the activities of the County Medical Societies. This program consisted of six papers and round table discussions on the following subjects:

Activities with a Purpose.  
A Family Doctor for Every Family.  
Community Health Service.  
PR approach to Business Methods.  
Working with Other Health Organizations.  
Promoting Voluntary Health Insurance.  
The Doctor and Civilian Defense.

#### The House of Delegates of the American Medical Association at the Clinical Session in Cleveland, Ohio, December 5-8, 1950.

Delegates Present: There were 195 of the 198 Delegates present on roll call at this session—All of the North Carolina Delegates; namely: Dr. B. O. Edwards, Asheville; Dr. M. D. Hill, Raleigh, and Dr. C. F. Strosnider, Goldsboro, were present. The Speaker of the House named Dr. M. D. Hill a member of the Executive Sessions Committee. Dr. C. F. Strosnider is a member of the Chronic Disease Committee.

Following the roll call the Speaker, Dr. F. Borzell, addressed the House of Delegates on matters pertaining to expediting the business of the House, etc.

Dr. Borzell presented Dr. Elmer Henderson, our President, who delivered an address which was in all ways characteristic of the manner in which our leader operates. His speech was brief, concise, and factual.

#### General Practitioner of the Year

The House of Delegates had before it nominations of Dr. Jim Camp, Pecos, Texas, Dr. Dean Sherwood Luce, Canton, Mass., and Dr. John William Strange, LooGooTee, Ind. On a second ballot, the House elected Dr. Dean Sherwood Luce, of Canton, Mass., the General Practitioner of the year.

The House of Delegates heard and acted on many resolutions studied and reported back to the House by the proper Reference Committees.

In order that you may have some idea of the business transacted by the Board of Trustees and the House of Delegates, we will enumerate below a sample of their activities, as follows:

Place of 1952 Clinical Session, Student American Medical Association, Investment Policy. The Journal and Special Journals, Today's Health, Standard Nomenclature of Diseases and Operations, American Directory, Library, Advertising Bureau and the reports of Councils on Pharmacy and Chemistry, Laboratories, Council on Physical Medicine and Rehabilitation and Council on Foods and Nutrition, Report of Bureau of Investigation, Report of Bureau of Legal Medicine and Legislation, Report of Bureau of Health Education, Report of Bureau of Exhibits and the report of the Bureau of Medical Economics Research.

#### Allergy Section

A Session on Allergy will be held in the Section on Miscellaneous Topics at the 1951 Atlantic City Annual Session.

The Board of Trustees announced to the House of Delegates that a half million dollars out of its National Educational Campaign Fund had been donated for the aid and support of Medical Schools which are in need of additional financing. On motion of Dr. B. O. Edwards, North Carolina, seconded by many, motion carried unanimously.

By the reading of the Journal of the American Medical Association, you will observe how the business of our National Organization continues to increase from year to year.

Respectfully submitted,  
C. F. STROSNIDER, Delegate.

**Dr. E. M. Salley:** I move the report be accepted. [The motion was seconded by Dr. Anderson of Asheville, put to a vote and carried.]

#### Report of Fraternal Delegate to 1950 Annual Session Medical Society of Virginia

I would like to take this opportunity to thank the Medical Society of North Carolina for the honor and privilege of attending, as a delegate, the meeting of the Medical Society of Virginia, which was held in Roanoke, Virginia, October, 1950.

Every courtesy was extended to Mrs. Fox and myself. We were well entertained and the scientific program was interesting and most beneficial.

Respectfully submitted,  
P. G. FOX, M.D.,  
Delegate to the Medical Society of Virginia

Report of 1951 delegates to the Medical Association of Georgia. This is a personal report.

**Dr. Claude G. Milham:** Dr. Angel was supposed to make the report. I do want to say, though, that we made the trip and we thoroughly enjoyed our trip and the hospitality that the Georgia State Medical Society extended to us. It was very instructive and I feel that we all got a lot out of it.

**President McMillan:** Does Edgar Angel wish to add anything to the report?

**Dr. Edgar Angel:** Mr. President, Members of the Society: On April 17, it was my pleasure to attend the 101st Annual Session of the Medical Association of Georgia, along with Claude G. Milham. Dr. Cathell was unable to attend on account of illness in the family.

The meeting was held at the Bon Air Hotel in Augusta. The first member I met, by happy coincidence, was Dr. A. M. Phillips, president of the Association. Dr. Milham and I were given the best accommodations in the hotel. It seemed entirely out of place that such should be the case when really outstanding physicians from Georgia were

forced to take quarters in the basement. There were 1200 registered.

The scientific meeting consisted of general sessions entirely, with subjects ranging from "The Role of Cerebral Angiography in the Management of Cerebral Vascular Accidents," to the "Etiology and Treatment of Fever Blisters." Such a program obviously was directed at the general practitioner.

The technical and scientific exhibits were about the same as we have at our Society. But the accommodations were not nearly as adequate.

However, the general conduct of the meeting was exceptionally good. The cordiality of the physicians, from Dr. James E. Paullin, former president of the American Medical Association, on down, was, I believe, in excess of any I have ever seen at any such gathering.

I shall always be grateful to this Society for the privilege of being named as one of its representatives to such an outstanding meeting.

[It was moved by Dr. Monroe, seconded by Dr. Henderson and carried, that the reports be accepted.]

**President McMillan:** Report of the North Carolina Board of Medical Examiners.

#### BOARD OF MEDICAL EXAMINERS

November 1, 1950 to January 15, 1951

The State Board of Medical Examiners elected at the meeting of the North Carolina State Medical Society in May, 1950, took office November 1st, 1950, at which time all properties and funds of the Board were turned over to the secretary-treasurer by the retiring secretary-treasurer, Dr. Ivan Procter.

The members of the new board were invited to attend the annual June, 1950, meeting of the 1944-1950 board for the purpose of indoctrination. At this time an executive session was held. Dr. Newsom P. Battle was elected president to serve for a period of one year and Dr. Joseph J. Combs was elected secretary-treasurer for the tenure of the board. The board met in joint session with the outgoing board at its final meeting on September 24-25, 1950, at which time an executive session was held and its first meeting was set for January 14-15, 1951.

All members of the board met for the January 14-15, 1951, meeting.

#### Grade B Graduates

The board resolved that it would not issue medical license to other than graduates of grade A medical schools.

#### Physicians for State Institutions

The superintendents of both the mental and tubercular institutions met with the board in an effort to work out the problem of procuring an adequate staff for said institutions.

The board ruled that it would continue with the policy of the outgoing board that the personnel now associated with the North Carolina State Hospital be allowed to take the written examination of the Board of Medical Examiners for licensure after having had three years under supervision of the superintendent and after having been recommended by said superintendent.

#### Licensure of Resident Physicians

Representative physicians appeared before the board to discuss the requirement that all resident physicians in the state have a license to practice medicine. This matter was discussed at length and the president appointed a committee from the Board of Medical Examiners to meet at a later date with this committee and that the question be brought again to the attention of the full board at its next meeting.

#### Policies

An extensive study was made of the policies of the Board of Medical Examiners and at the present



time it was decided that the established policies would be continued in the main.

#### Revocation of Medical License

RE: Dr. W.—Dr. W. was convicted in the Federal Court for violation of the Harrison Narcotic Act and was fined \$500.00 and sentenced on two counts to 18 months imprisonment, sentence to run concurrently. Execution of sentence was suspended and Dr. W. was placed on probation for a period of five years.

Dr. W. was duly subpoenaed to appear before the board to answer to charges of the Board of Medical Examiners because of said conviction, at which time he was advised that he might be represented by counsel.

A court-like hearing was held and the board was represented by its attorney, John H. Anderson. Dr. W. did not elect to be represented by counsel. Certified copies of the Bill of Indictment and Judgment of the Federal Court were submitted as exhibits in the hearing. The narcotic agent, who directed the investigation made on Dr. W., appeared and presented evidence.

The following is resolution of the board following careful consideration of this case: "RESOLVED: That the Board of Medical Examiners of the State of North Carolina find and conclude that Dr. W. is guilty of having violated the Federal Narcotic Act; that he was convicted of a felony in the Federal Court as set forth in the charges, upon which his case was heard, and that his license to practice medicine in the State of North Carolina should be revoked. And resolved further, that the license of Dr. W. be and the said is hereby revoked as of January 15th, 1951."

Dr. W. surrendered his medical license and the same is on file with the secretary of the board.

The Board of Medical Examiners is cognizant of the great responsibility placed upon it and shall endeavor individually and collectively to administer the Medical Practice Act and to uphold the high standard of the medical profession in the State of North Carolina.

The members of your board are:

Dr. Newsom P. Battle, Rocky Mount—Examiner in Surgery.

Dr. Joseph J. Combs, Raleigh—Physiology and Chemistry, alternating with Dr. L. Randolph Doffermyre.

Dr. L. Randolph Doffermyre, Dunn—Medicine and Therapeutics, alternating with Dr. Joseph J. Combs.

Dr. Clyde R. Hedrick, Lenoir—Pathology and Bacteriology.

Dr. Amos N. Johnson, Garland—Pharmacology, Pediatrics and Hygiene.

Dr. James P. Rousseau, Winston-Salem—Anatomy, Embryology and Histology.

Dr. Heyward C. Thompson, Shelby—Gynecology and Obstetrics.

Physicians granted license by reciprocity ..... 23

Physicians granted limited license as hospital residents ..... 7

Physician refused permission to take written examination for licensure ..... 1

Grade B graduate

Hearings ..... 2

Physician—narcotic addiction ..... 1

Physician convicted felony Federal Court ..... 1

Violation Harrison Narcotic Act

Revocation Medical License ..... 1

Convicted Federal Court violation Harrison's Narcotic Act.

#### NORTH CAROLINA STATE BOARD OF MEDICAL EXAMINERS

NEWSOM P. BATTLE, M. D.,

President,

JOSEPH J. COMBS, M. D.,

Secretary-Treasurer.

The North Carolina State Board of Medical Examiners presents to you, the Medical Society of the State of North Carolina, a report on our activities for the year, 1950.

#### Foreign Medical Schools

The board has endeavored during its tenure of office through the American Medical Association to have foreign medical schools classified in order that qualified graduates of such schools might be eligible for medical licensure in this state. On February 5th, 1950, the Council on Medical Education and Hospitals and the Executive Council of the Association of American Medical Colleges issued a list of foreign medical schools whose current and past graduates had received training that would justify their being considered on the same basis as graduates of approved medical schools in the United States.

#### Reciprocal Relations with the State of Idaho

The Idaho State Board of Medicine, which had not previously had reciprocal relations with any medical board, revised its Medical Practice Act, and asked for reciprocity. After a study of the Idaho Medical Practice Act, which compared favorably with that of North Carolina, reciprocal relations were established with said board.

#### Reciprocal Relations with the State Board of Rhode Island

The Rhode Island State Board of Medical Examiners had not previously had reciprocal relations with other states. It, however, petitioned the North Carolina Board of Medical Examiners to enter into reciprocal agreement, with which our board concurred.

#### Reciprocal Relations with the Minnesota State Board of Medical Examiners in the Basic Sciences

The requirements of the two boards did not compare with each other in every instance; however, reciprocal relations were established whenever the applicant meets the requirements of said boards.

#### Narcotic Addicts

Your board has continued in its policy of a detailed study of each unfortunate physician who is addicted to the use of narcotics, whether or not he has been convicted of any offense. We feel that we have met with a reasonable degree of success by such endeavors.

Dr. B. was reported to be doing well following hospitalization at the United States Public Health Service Hospital.

The license of Dr. A. was revoked because of his use of narcotic drugs; however, sentence was suspended and shall not go into effect unless and until the Board of Medical Examiners received evidence that Dr. A. had personally used narcotics, hypnotics or any other habit forming drugs administered personally or by someone else in any manner whatsoever or until he has violated the Narcotic Act. He was ordered to report to Dr. M. D. Bonner at Jamestown, North Carolina, every 30 days to show compliance with this order.

Dr. C. was directed on two occasions to appear before the board with reference to his narcotic addiction, with which orders he failed to comply. His license to practice medicine was therefore revoked.

Dr. H. C., who had been under the surveillance of the board for some years has had a complete breakdown and is confined to the Veterans' Hospital at Roanoke for treatment of schizophrenic reaction, paranoid type.

Dr. F. is reported to be doing well since his hospitalization at the United States Public Health Service Hospital.

Dr. S. is doing well according to reports received upon investigation. He stated that he did not desire to have his narcotic license restored at the present on account of the temptation.

Dr. J. S. has repeatedly violated the order of the board though recent investigation reveals that he is apparently doing well.

Dr. Y., whose license had been revoked and reinstated has conducted himself in such a good manner that the board recommended to the Narcotic Bureau that his narcotic license be reinstated.

#### **Members of the Incoming Board of Medical Examiners Indoctrinated**

The members were invited to attend the June meeting, at which time written examination was held, applicants for licensure by endorsement of credentials were interviewed, and other business was conducted. On September 25th the board held its final meeting and the incoming members were invited to attend all sessions of this meeting.

#### **Physicians in Adjoining States**

The board has continued its policy to grant limited license to physicians who live in adjoining states when they desire to come into North Carolina for specific practice in a certain borderline county or counties. The Attorney General has concurred in this policy. One physician, who resides and practices in South Carolina and who desired to work in a certain county, was very dissatisfied with a limited license. He petitioned the board for a full license and employed an attorney who appeared before the board on his behalf. The secretary of the Texas Board of Medical Examiners, with which board this physician reciprocated, was apparently misinformed as to the reason for the granting of limited license and advised that it would be necessary to cancel reciprocal relations with North Carolina unless this physician was granted a full license. A full explanation was made to the secretary of the Texas Board, which clarified the matter and did not estrange reciprocal relations with North Carolina and Texas.

#### **Laymen Practicing Medicine Without a License**

The Board of Medical Examiners first considered the matter of laymen practicing medicine in Madison County without license in 1947 and since that time has endeavored to obtain a complete investigation. The investigation was completed by the State Bureau of Investigation, which appeared to give conclusive evidence that said laymen were practicing medicine without a license. The case has been referred to the Attorney General for indictment and prosecution.

Mrs. J. L. Broughton of Raleigh, an alleged cancer quack, had been investigated by the State Bureau of Investigation for practicing medicine without a license and the case had been turned over to the solicitor for indictment and prosecution. In June, 1950, the solicitor advised that Mrs. Broughton had expired.

E. E. Edwards, Goldsboro, N. C., "Original Artificial Blood Circulator" — This man had advertised by writing letters to physicians and was alleged to be practicing medicine without a license. An investigation by the State Bureau of Investigation was requested, which investigation failed to reveal that he had prescribed any drugs or medicines and the Attorney General did not find evidence that he had violated the Medical Practice Act.

Clarence Matthews, Olivia, N. C. — The State Bureau of Investigation was requested to investigate this man for alleged practice of medicine without a license. From information received, the agent of the State Bureau of Investigation obtained a war-

rant from the Recorder's Court charging the practicing of medicine without a license. The defendant was tried and found guilty in the Recorder's Court and was given 90 days on the roads, suspended upon payment of \$50.00 and upon condition that he refrain from holding himself out as a doctor and refrain from the practice of medicine.

T. J. McDonald of Hendersonville advertised in the newspapers and circulars were mailed out to boxholders bearing the name of "Dr. T. J. McDonald, M. D., P. T." He was indicted by the Federal Government on the charge of using the mails to defraud. He was convicted in the United States District Court to serve two years in Federal Prison and was fined \$1,000.00.

George W. Pearsall, Smithfield, N. C., was alleged to be practicing medicine without a license and an investigation by the State Bureau of Investigation was requested. It was ascertained that he was known as a "faith healer" and that he was reputed to see patients, but the solicitor advised that there was not sufficient evidence for prosecution.

#### **Physician Practicing Without License**

Dr. Samuel Victor, graduate of a grade B medical school was directed to appear before the board with reference to practicing without a license. He was employed by the Atlantic Coast Line Railway and was working in its hospital in Rocky Mount. Dr. Victor was advised that he could not remain in such a capacity without a license, but he was allowed to remain there 90 days in order that a physician might be procured to replace him.

The board resolved that funds be set aside for the purpose of writing a history of the North Carolina State Board of Medical Examiners and that Dr. Ivan Procter serve as chairman of the committee.

#### **Untimely Death of Dr. Paul G. Parker**

Eulogy by the Board Committee, Dr. R. B. McKnight, Chairman; August 11, 1894 — September 19, 1950

We were dazed at the news of Paul's death. It was confusing, and it did not make sense. It did not seem right that our genial, loveable colleague was no longer with us. Membership on the Board of Medical Examiners of the State of North Carolina was not only a pleasure and privilege to him—it was a solemn duty. He served on our board faithfully; he showed much understanding of the various intricate problems that arose; he was sympathetic, almost to a fault, to those unfortunate members of the profession who ran afoul of the law, but he was not to be swayed in his judgment until he knew every phase of the issue. He was intensely interested in those young doctors seeking license by examination and tolerant and attentive to those seeking our certificate by endorsement of credentials. There was no phase of our duties in which he did not exemplify the keenest interest. He never missed a meeting until the very last one of the board—and he would have been there had Almighty God, whom he devotedly worshipped, not smiled upon him and taken him unto Himself.

Paul was a good doctor. Had he elected to work in a specialized field, he would have gone to the top. But his knowledge of medicine and of people was profound and wisely he chose to remain a general practitioner—a family doctor. He was one of the best.

He was a devoted father and husband; a congenial friend who held his friendships—a rare attribute in these days of hurry, confusion and selfishness. He passed away as we know he wished to pass—in the line of duty. Paul Parker was a MAN.



**Election of Dr. Paul F. Whitaker**

Dr. Paul F. Whitaker of Kinston, N. C., was elected to fill the unexpired term created by Dr. Parker's death.

**Summary Report**

At the direction of the board the secretary prepared a Summary Report for the six-year tenure of office. The same was prepared in a bound volume and copies presented to members of the incoming board in order to acquaint them with the policies and activities of the outgoing board. Copies were also presented to the officers of the State Society. This is the first time that such a report has been made by the Board of Medical Examiners.

This is the sixth and final year of service for this board. The term of office came during the height of World War II and in the postwar period when there was a mass attempt of displaced physicians to obtain medical license in North Carolina. There were efforts on the part of applicants, attorneys, laymen, state officials, and even misguided members of our profession to circumvent the policies of the board.

The board at all times individually and collectively has been attentive, industrious, conscientious and harmonious in its application and enforcement of the North Carolina Medical Practice Act for the benefit of all of the citizens of the state, with justice and fairness to the applicants, and at the same time maintain a high standard of medical practice.

The number of applicants, legislative attempts to break down our medical standards, investigation of illegal practice, the study of and assistance to physicians afflicted with narcotic addiction has far exceeded any previous six-year term.

**Full Time Assistant Secretary**

The employment of a full time, highly qualified, assistant secretary has greatly expedited the work and benefitted the board, the applicants, and all of those seeking service.

To summarize, the board has assembled five times in the past twelve months in order to expedite licensure of physicians and to conduct other business. All members have attended all meetings.

The secretary turned over all records, office equipment, funds, et cetera, to Dr. Joseph J. Combs, Secretary-Treasurer of the 1950-1956 Board of Medical Examiners, November 1, 1950.

Total number applicants granted license	252
By reciprocity	155
By written examination	97
Written examination failure	1
Applicants rejected licensure by endorsement	2
Grade B graduate	1
Locus Tenum	1
Applicants refused permission to take written examination	0
Limited license granted	56
Physicians in borderline states desiring practice in limited area	4
Hospital Residents	52
Hearings	8
Physician practicing without license, Grade B graduate	1
Narcotic addiction	7
Investigation by State Bureau of Investigation	4
Laymen alleged to be practicing medicine	
Recommendation restoration narcotic license	1
License restored	1
Physician convicted manslaughter and criminal abortion in Superior Court	
License voluntarily surrendered	1
License revoked	2

Narcotic addiction — License revoked, judgment suspended ..... 1  
Narcotic addiction — License revoked ..... 1

NORTH CAROLINA STATE BOARD  
OF MEDICAL EXAMINERS  
M. D. BONNER, M. D., Pres.  
IVAN PROCTER, M. D., Sec.-Treas.

Dr. C. W. Byrd: I move that the report be accepted.

[The motion was seconded by Dr. Watson Wharton, put to a vote and carried.]

**President McMillan:** Report of the North Carolina Board of Nurse Examiners.

The report of your representative of the North Carolina Board of Nurses Examiners, both for Professional Nurses and Practical Nurses.

The report for the Professional Nurses is as follows:

The North Carolina Board of Nurse Examiners conducted two examinations for professional nurses in 1950.

1. May 30 and 31, 1950, in Raleigh, N. C.	
Reported for examinations	179
Passed examinations	150
Registered by reciprocity in recognition of their registration in other states	190
2. October 4 and 5, 1950, in Raleigh, N. C.	
Reported for examinations	587
Passed examinations	508
Registered by reciprocity in recognition of their registration in other states	68
(Of the 79 failures, 42 of these were colored)	

Totals for 1950	
Reported for examinations	766
Passed examinations	658
Registered by reciprocity in recognition of their registration in other states	258
Total registered for 1950	916
Total registered for 1949	772
Total increase in 1950 over 1949	144

On January 1, 1951, there were 53 registered by reciprocity in recognition of their registration in other states.

The Spring examination for professional nurses will be held on April 4 and 5, 1951, at the Robert E. Lee Hotel, Winston-Salem, North Carolina.

Number of professional nurses currently registered in 1950 ..... 8,168

Number of professional nurses currently registered in 1951, to March 15, 1951 ..... 8,739

The North Carolina Board of Nurse Examiners compiled by county from January 1, 1950, to August 1, 1950, a list of currently registered nurses. Statistics are available as to type of nursing, race and county in which working.

We now have only 37 accredited schools in North Carolina for Professional Nurses, and I am informed that 3 of these will be closed before the Fall session begins. To me, this is an alarming condition as we need Professional Nurses so badly in our State.

The following is the report for the North Carolina Board of Nurse Examiners for Practical Nurses.

The North Carolina Board of Nurse Examiners, Enlarged, conducted two examinations for licensure of practical nurses in 1950, and one in 1951.

June 1, 1950, in Raleigh, N. C.	
Licensed by examination	11
October 3, 1950, in Raleigh, N. C.	
Reported for examinations	37
Passed examinations and licensed	35
Total licensed by examinations in 1950	46
Total licensed in 1950 in recognition of their licensure in other states	11
Total licensed in 1950	57

February 1, 1951, in Raleigh, N. C.	
licensed by examination	28
Licensed in 1951 in recognition of their	
licensure in other states	4
Total licensed in 1951	32
Total licensed in 1950 and 1951	89
Total number licensed by waiver from June 1,	
1947, to July 1, 1949	2,523
Total number licensed by examination since	
1949	114
Total number licensed since June 1, 1947	2,661
Number of practical nurses currently licensed	
in 1950	2,090
Number of practical nurses currently licensed	
in 1951 to March 15, 1951	1,868

I am happy to report that we are having new schools opening every year for Practical Nurses. We now have 8 schools which are as follows:

1. Alamance General Hospital School of Practical Nursing, Burlington, N. C.
2. Banner Elk School of Practical Nursing, Grace Hospital, Banner Elk, N. C.
3. Durham School of Practical Nursing for Negroes, Duke Unit, Durham, N. C.
4. Durham School of Practical Nursing, Watts Hospital Unit, Durham, N. C.
5. Raleigh School of Practical Nursing, Mary Elizabeth Hospital, Raleigh, N. C.
6. Washington School of Practical Nursing, Tayloe Hospital, Washington, N. C.
7. Wayne County School of Practical Nursing, Wayne County Memorial Hospital, Goldsboro, N. C.
8. Albemarle School of Practical Nursing, Stanly County Hospital, Albemarle, N. C.

Respectfully submitted,  
**LOUTEN R. HEDGPETH, M. D.**  
 Examiner for State Medical Society

**Dr. L. R. Hedgpeth:** Mr. President and Delegates: We have had one examination since my report was sent in, that was April 4th and 5th. We had 149 take the examination, and 74 were retakes. Of the 74, 32 were colored girls. We haven't our report as to the number who passed.

We do have a fall examination which will be the largest we have had, over 700 girls taking this examination, and it will be held four days in Raleigh instead of the regular schedule.

**Dr. Moir S. Martin:** I move the report be accepted.

[The motion was seconded by Dr. Edwards, put to a vote and carried.]

Report of the North Carolina Hospital Saving Association, Dr. E. McG. Hedgepeth, Medical Director.

**Dr. E. McG. Hedgepeth:** Mr. President, Members of the House of Delegates, Ladies and Gentlemen. The following remarks represent in summary fashion the past year's work in Hospital Saving Association. A year which shows continued sound progress and is also unusual and challenging.

Perhaps the most outstanding feature of the year has been the large net increase in Blue Cross membership. As of December 31, 1950, there were 432,359 Blue Cross participants. The gain in Blue Shield participants continues, and as of the same date a total of 399,857 individuals held Blue Shield certificates. The gain in Blue Shield now is not quite so great percentage-wise as it has been over the past year or so, but I think this is logical and to be expected as the gap between Blue Cross and Blue Shield becomes narrower and the two figures more nearly approximate each other. According to the National Blue Shield Commission's report Hospital Saving Association is the ninth largest Blue Shield plan in the United States.

Trends throughout the United States show a

steady increase in the incidence of hospitalization among Blue Cross certificate holders. Rising from an average of approximately 1-8 over the past few years to an average of 1-6 in the past year or two. This increase in usage along with steady increases in hospital costs and rates has prompted practically all Blue Cross plans in the United States either to increase premiums to all certificate holders or attempt to meet the situation by some form of co-insurance. Hospital Saving Association as of October 1, 1950, after careful study and with the help of the State Insurance Commissioner, instituted a co-insurance feature designed to affect as little as possible the individual with a long hospital stay and resulting larger bill. At the same time it was arranged so that groups who chose to do so could substitute an increase in premium rates. This was utilized chiefly by industrial groups where the employer paid all or part of the premium. These changes are proving to be both sound and acceptable.

At the end of 1950 Hospital Saving Association assets had increased to \$1,609,473.77, and listed among these assets is a very attractive home office building which is nearing completion. Reserves have continued to increase in proportion to growth in membership. The total legal and operating reserve as of March 31, 1951, was \$736,076.76.

The beginning in 1936 was a modest one with 14,395 certificate holders and \$17,886.39 paid in claims. Hospital Saving Association is now 15 years old and during this time through its office a total of \$21,022,760.80 has been paid in claims to the hospitals and doctors of North Carolina. In 1950, \$1,487,427.50 was paid to physicians alone under Blue Shield claims for surgery and obstetrics and \$3,366,520.87 was paid to hospitals.

These figures, it seems to me, are quite significant of growth and progress in the field of medical economics. Furthermore, I feel they represent a strong desire on the part of our own patients to meet the financial obligations of their hospital and professional relationships in the spirit of self-respecting independence. It is my very firm belief that the average American citizen, certainly the average North Carolinian, does not want Federal Medicine, and if we but have the courage, wisdom, and social consciousness to show him the way he will gladly follow us rather than Mr. Ewing and his like.

We, and this pronoun is intended to include hospital leaders as well as physicians, have had a terrific and challenging responsibility thrust upon us. Sometimes I feel discouraged in our attempts to meet and cope with this responsibility. The famous statement that "... divided we fall, and united we stand" is equally as applicable here as in the field of international politics. We as physicians must take the lead and guide the way in the management of our own affairs. Along with this leadership, which must be born of the spirit of service, the same spirit which has ever made medicine an honorable profession, we must always remember that it is the public we serve and that we are mutually dependent. We are not fighting the battle for freedom in medicine only, but in doing this we are waging a battle for all posterity in all phases of our life and for freedom of our own way of life.

**Dr. Lester A. Crowell, Jr.:** I move that the report be accepted.

[The motion was seconded by Dr. L. R. Hedgpeth, put to a vote and carried.]

**President McMillan:** Next we have the report of the first three meetings of the Executive Committee which was gone through in the usual manner and was adopted by the Executive Council yesterday. I ask the secretary to read this to you for your information.



**REPORT OF EXECUTIVE COMMITTEE  
to the  
HOUSE OF DELEGATES  
As of May 1, 1951**

As required by the By Laws this Committee, and Interim Authority, report that upon the call of the President of the Society the Executive Committee has met upon three occasions through the past year as follows:

September 17, 1950.....Raleigh, N. C.  
November 26, 1950.....Raleigh, N. C.  
March 11, 1951.....Raleigh, N. C.

The purpose of said meetings was to transact details of business essential to the operation of the several functions of the Society and to consider propositions and questions arising out of relations with component societies and with the American Medical Association. Briefly, and as concisely as practicable, these transactions are set forth herein.

**Meeting of September 17, 1950:**

There was a Joint Meeting of the Committee with the Executive Board of the North Carolina Dental Society relative to the operation of the school-health program throughout the State involving the expenditure during the school year of \$850,000.00 in a conjoint school-health program administered for the State Board of Health and the State Board of Education. There was a thorough discussion related to economic criteria on families to be recipients of this aid for correction of defects and of the methods of compensating physicians for the performance of authorized medical service.

On motion, duly seconded, resolve that it is the sense of the State Medical Society that the health needs of the school children in the State can best be met by a twofold program, one of education and one of medical activity; that funds appropriated by the legislature for the purposes of health education shall be appropriated for the Department of Education; that funds appropriated for health needs of children with regard to examination of remedial defects and control of communicable diseases shall be appropriated to or for the State Health Department.

The motion carried.

On motion, duly seconded and carried, the resignation of Dr. Hugh A. McAllister from the Committee on Nominations was accepted.

On motion, duly seconded and carried, Dr. J. F. Foster of Sanford was elected to fill the one year unexpired term of Dr. Hugh A. McAllister on the Nominating Committee.

On motion, duly seconded and carried, the report and recommendation of the Cancer Committee on the operation of the Mobile Cancer detection unit was accepted, to wit: that the operation of the unit was perfectly safe; that its operation to the extent of 10,000 cases detected and reviewed should be approved, but; that it not undertake to operate in any county in the state until such operation had been approved by the County Medical Society.

On motion, duly seconded and carried, the schedule (as modified) **token fees** for the medical treatment of early and late cancer payable, respectively, by the State Board of Health and the North Carolina Division of the American Cancer Society for indigent cancer patients was approved as recommended by the Committee on Cancer. (Note: Such a cancer fee schedule was sent to every member of the Medical Society of the State of North Carolina early October, 1950.)

On motion, duly seconded and carried, approved the recommendation of the Committee on Cancer that the film "Self Examination for Breast Cancer" be recommended for showing to lay audiences only in the presence of a physician who may elab-

orate on other pertinent symptoms of breast cancer than lumps.

The extensive report of the Committee on Hospital and Professional Relations was discussed relative to instances of contract practice of medicine and to the problem of compulsory charges for collection by hospital administration of physician's services. It was the conclusion of the Executive Committee that the problem required further study and instructed the reporting committee to proceed further and report again to the Executive Committee.

On motion, duly seconded and carried, a report of the Committee on Public Relations, entailing an enumeration of fourteen areas of activities and/or potential areas of activity, was approved.

On motion, duly seconded and carried, the President of the Society was authorized to designate a delegate or delegates to confer with the Chairman of the U. S. House of Representatives Military Affairs Committee in regard to the Armed Forces discrepant slow-rate of calling up first priority physicians under the special (medical) personnel clause of the Federal Draft Act rather than calling up Reserve Medical Officers who have seen extensive action and service in prior World Wars.

On motion, duly seconded and carried, the report and recommendations of the Committee on Emergency Medical Service involving a five point survey of emergency medical service agencies and their agreement to collaborate in further organization was accepted; a three point medical society organization program for activating medicines' share in the responsibility for civil defense was approved, and; further authority extended to the Committee to proceed with its responsibilities and activities. Secretary Hill presented the budget report adopted by the Committee on Finance outlining the Budget for the year 1951. The items and major departments of the Budget were essentially the same as approved for the previous year and the exceptions were explained.

On motion, duly seconded and carried, the following Budget for the fiscal year 1951 was authorized and adopted:

**BUDGET ESTIMATE**

January 1, 1951, to December 31, 1951

<b>RECEIPTS (estimated):</b>		\$102,787.50
Balance January 1, 1951.....	\$ Nil	
Assessments (1950 paying members)*.....	78,000.00	
Interest (net).....	287.50	
Sales (estimated on 1950).....	350.00	
Author contribution cost of cuts.....	400.00	
Revenue, unexpected (estimate).....	250.00	
Technical exhibits		
(estimated basis 1949).....	6,000.00	
Journal Advertising		
(estimated basis 1950).....	17,000.00	
A.M.A. Remittance 1% of 1951		
dues processed**.....	500.00	
<b>EXPENDITURES (estimated):</b>		\$102,302.00
Schedule A.....	\$25,255.00	
Schedule B.....	23,338.00	
Schedule C.....	15,369.00	
Schedule D.....	1,850.00	
Schedule E.....	22,750.00	
Schedule F.....	8,465.00	
Schedule G.....	5,275.00	
<b>EXCESS OF RECEIPTS (estimated)</b>		
<b>OVER EXPENDITURES (estimated)</b> .....	\$ 485.50	
<b>RESERVES (estimated):</b>		\$ 18,288.00
<b>Bonds</b>		
Cost value.....	\$46,724.00	
Increment (estimated).....	900.00	
Excess of 1951 income to be invested.....	485.50	

\*Based on dues @ \$40 per member per annum

\*\*To be appropriated to secretarial budget (A-6)

The above budget estimate was reported by the Committee on Finance with a recommendation to the Executive Committee that it be adopted. The Executive Committee of the Medical Society of the State of North Carolina adopted the above budget at the regular Fall meeting held in Raleigh, North Carolina, September 17, 1950.

JAMES T. BARNES,  
Executive Secretary.

# Tentative: Schedule of Estimated Budget Accounts January 1, 1951, to December 31, 1951.

## A. EXECUTIVE BUDGET: ----- \$25,255.00

A-1 President, expense of (travel and communications) ..	\$ 900.00
A-2 Secretary-Treasurer, salary of ..	2,100.00
A-3 Secretary-Treasurer, travel of ..	600.00
A-4 Executive Secretary salary of ..	7,500.00
A-5 Executive Secretary, travel of* ..	2,100.00
A-6 Executive Office, clerical assistants ..	5,000.00**
A-7 Executive Office, equipment for and/or replacements ..	800.00
A-8 Executive Office, expense of (12 months rent, communications, printing and supplies, repairs and replacements) ..	3,800.00
A-9 Bonding ..	310.00
A-10 Audit ..	200.00
A-11 Taxes (salary tax) ..	165.00
A-12 Insurance, fire, compensation and employer's liability ..	100.00
A-13 Membership Record System, purchase and installation of (estimate) ..	1,250.00
A-14 Publications, reports and executive aids ..	100.00

\*Basis: Real for personal maintenance and travel by common carrier and mileage at the rate of seven cents for official use of personal automobile.

\*\*Any increment of revenue derived from collection efforts related to A.M.A. dues and process of same shall accrue to this item; provided specific authority of the Executive Council is given to expenditures from such increments.

## B. JOURNAL BUDGET: ----- \$23,338.00

B-1 Journal, publication of ..	\$17,200.00
B-2 Journal, cuts for ..	700.00
B-3 Editor, salary of ..	2,100.00
B-4 Assistant Editor, salary of ..	2,100.00
B-5 Editorial Office, expense of (12 months rent, communications, printing and supplies, repairs and replacements) ..	400.00
B-6 Journal Business Manager's Office, expense of (12 months communications, printing and supplies, repairs and replacements) ..	300.00
B-7 Business Manager's Office, equipment for ..	200.00
B-8 Journal, travel for (local and National) ..	200.00
B-9 Taxes, (salary tax) ..	63.00
B-10 Refunds, subscriptions, etc. ....	75.00

## C. INTRA FUNCTIONAL ACTIVITY BUDGET: ----- \$15,369.00

C-1 Executive Committee, expense of and travel of Councilors ..	\$ 2,569.00
C-2 Councilors, travel of in District ..	250.00
C-3 Councilors, expense of (communications, printing and supplies) ..	200.00
C-4 Legislative Committee, expense of (legislative year—National aspects) ..	1,000.00
C-5 Public Relations Committee, expense of ..	500.00
C-6 Maternal Welfare Committee, expense of (secretarial, communications, productions, printing and supplies) ..	1,100.00
C-7 Rural Health and Medical Care Committee, expense of (salary contribution, travel, printing and supplies, reproductions, equipment, and communications) ..	6,500.00*
C-8 Cancer Committee, expense of ..	300.00
C-9 Convention Arrangements Committee, expense of ..	150.00
C-10 Scientific Exhibits Committee, expense of ..	100.00
C-11 Committee on Mental Hygiene ..	500.00
C-12 Committee on Grievances, expenses of (travel, reporter services and communications) ..	700.00
C-13 Committees in general, expense of ..	1,200.00

\*To be excerpted from earmarked portion of funds allocated to public relations derived from annual dues.

## D. EXTRA-FUNCTIONAL ACTIVITIES BUDGET: \$ 1,850.00

D-1 Delegates to A.M.A., expenses of (3 to each annual and clinical session, Atlantic City & Dallas) ..	\$ 1,400.00
D-2 Conference dues ..	100.00
D-3 Woman's Auxiliary (contribution to annual program and reporting ..	250.00
D-4 Delegates (2) to A.M.A. Regional Conference @ \$50.00 ..	100.00

## E. PUBLIC RELATIONS PROGRAM\*: ----- \$22,750.00\*\*

E-1 Secretary for public relations, salary of ..	\$ 6,400.00
E-2 Secretary for public relations, travel of ..	2,100.00
E-3 Committee Chairman, out of state travel of ..	300.00
E-4 Public Relations, stenographic assistance ..	2,100.00

E-5 Public Relations, equipment for ..	1,000.00
E-6 Public Relations, expense of (12 months rent, postage, express, telegraph, printing and supplies, repairs and replacements) ..	2,500.00
E-7 Taxes (salary tax) ..	128.00
E-8 Publications and executive aids ..	250.00
E-9 Radio-Motion Picture production, distribution and printing ..	2,850.00
E-10 News and press release, production, distribution and printing ..	500.00
E-11 Public and personified activities in the field of public relations ..	1,000.00
E-12 High School essay contest, expense of (scholarship, communications, printing and supplies) ..	800.00
E-13 Collateral public relations with other committee activities ..	822.00

\*Authorized by 1949 House of Delegates with proviso that \$15 of annual dues (estimated to gross \$28,000.00) be specifically allocated and earmarked for the support of a public relations program. The division allocations are estimates only and may be changed within the total of the public relations budget.

\*\*Total diminished by allocation to Rural Health as per policy established by Executive Committee October 30, 1949.

## F. ANNUAL SESSIONS (97th)

### CONVENTION BUDGET: ----- \$ 8,465.00

F-1 Programs ..	\$ 600.00
F-2 Hotel Convention Expense ..	1,600.00
F-3 Publicity promotion expense and reporter's expense ..	150.00
F-4 Entertainment (general, involving personnel) ..	300.00
F-5 Orchestra and floor entertainment ..	800.00
F-6 Guest speakers (3) expense of and/or honorarium for ..	350.00
F-7 Banquet speaker, fee and expense of ..	300.00
F-8 Electric Amplification ..	175.00
F-9 Booth installations, supplies and signs (scientific and technical) including exhibit expense and promotion ..	2,500.00
F-10 Projection, expense of (service-rentals) ..	400.00
F-11 Badges (members, guests, auxiliary) ..	250.00
F-12 Reporting service of transactions (sessions and sections) ..	1,000.00
F-13 Rentals, extra facilities for sections ..	40.00

## G. MISCELLANEOUS BUDGET: ----- \$ 5,275.00

G-1 Previous accounts payable ..	\$ 100.00
G-2 Refunds (dues, etc.) ..	200.00
G-3 Legal Council, retainer of and fees for ..	2,500.00
G-4 Reporting (Executive Council, etc.) ..	1,200.00
G-5 President's Jewel ..	75.00
G-6 Token, plaque and certificate, mats General Practitioner of Year ..	100.00
G-7 Sections (10), expense of (postage and printing) ..	100.00
G-8 Contingency and Emergency ..	1,000.00

On motion, duly made, seconded and carried, the Committee authorized the transfer of two items in the 1950 budget and the A.M.A. administrative allowances for processing A.M.A. dues to the clerical budget of headquarters office, in the aggregate of \$883.00, for use in meeting clerical expenses for the fiscal year 1950.

On motion, duly seconded and carried, the Treasury was authorized to increase the authorized capitalization fund of the Physician's Service Corporation by \$5,000.00 to a total of \$15,000.00 to meet stipulations of the N. C. Insurance Commissioner.

On motion, duly seconded and carried, the dues of members in good standing in 1950 (or members of the Armed Forces throughout 1950) are authorized to be remitted for those members actively engaged in the Armed Forces of the United States on or after January 1, 1951, and for the duration of the emergency incident to and growing out of the Korean action of the Armed Forces.

A letter and a resolution emanating, respectively, from the North Carolina Pharmaceutical Association citing the principles of Medical Ethics of the American Medical Association and related to the establishment of pharmacies by clinics or group practices developed by physicians was presented to the Committee as information for consideration.



On motion, duly seconded and carried, the Committee authorized the Society to take a stand in conformity with the A.M.A. code of Ethics on the subject and authorized the Secretary and Executive Secretary of the Society to undertake the clarification of any instance of contrary relationships involving physician members from time to time.

On motion, duly seconded and carried, the income limit for physicians falling within the "Affiliate Members" class of Society member was set at \$4,800.00.

On motion, duly seconded and carried, the President, Secretary, and Executive Secretary were authorized to develop and project a system of application and confirmation of "Student Membership" in the Society as is ultimately authorized by the Constitution and By Laws.

On motion, duly seconded and carried, Resolution of the American Association of Physicians and Surgeons on the subject of the Hoover Commission report on waste and inefficiency in Federal Government Medical Services was accepted as information.

On motion, duly seconded and carried, the Executive Secretary was authorized to revise and install a more adequate system of membership record.

On motion, duly seconded and carried, the Committee authorizes the policy generally permissive of physicians joining bona fide credit bureaus located in their communities.

#### Executive Committee Meeting

Raleigh, N. C., November 26, 1950

A called meeting of the Executive Committee of the Medical Society of North Carolina was held at the Sir Walter Hotel, Raleigh, North Carolina, at 11:00 o'clock A.M., November 26, 1950, a quorum of nine being present. The essential considerations and actions of the Committee were as follows:

The morning open session was devoted to reports of Committees, Hospital, and Professional Relations, Rural Health, Advisory to the Industrial Commission on Fees in Industrial Cases, Grievances, Archives of Medical History, Operation of School-Health Plan, and Physicians Committee on Nursing.

At the afternoon executive session the Committee continued to consider and/or act upon the Committee reports enumerated above.

On motion, duly seconded and carried, the Committee placed the Medical Society of the State of North Carolina on record as not approving any plan of collection by hospitals of physician's fees for service.

On motion, duly seconded and carried, the Executive Committee adopted a recommendation of the Committee on Hospitals and Professional Relations requesting the Chief Physician and the Board of Trustees of the Ashe County Memorial Hospital to abandon this present contract and devise a new contract which will conform to the ethical principles of the American Medical Association and the Medical Society of North Carolina.

On motion, duly seconded and carried, the Executive Committee reaffirmed its adoption of the Hess Report as adopted by the American Medical Association June, 1950, and that due notice of this action be conveyed to the President of the North Carolina Hospital Association and all hospitals in the State.

On motion, duly seconded and carried, the Committee expressed the sense of the Medical Society of the State of North Carolina to request the North Carolina Hospital Association to consider making their charges to patients on the basis of room cost and not to make up hospital deficits by over charging on certain special items and to authorize the President to appoint a committee to

study the question of such over charges and to join with a similar committee of the Hospital Association in making such a study and recommendation to the Society and the Hospital Association.

On motion, duly seconded and carried, the Committee authorized a request to each component County Medical Society to appoint a committee on hospital and professional relations.

On motion, duly seconded and carried, the progress report on the activities of the Rural Health Committee and its immediate plans of extending services to the County Societies was accepted and the work of the Committee and Miss Charlotte Rickman and their untiring efforts and good work were endorsed.

A report of the Committee on Fees in Industrial Cases elaborating their experience and progress with the Industrial Commission through the year was received and by formal action was accepted by the Executive Committee.

On motions, duly seconded and carried, the organizational reports of the Committee on Grievances as well as the Committee on Archives of Medical History were accepted.

On motion, duly seconded and carried, the routine report of the Committee to Cooperate with the North Carolina State Board of Health and the Optometrists on the Operation of the School-Health Plan was accepted.

A like motion to accept the routine report of the Physicians Committee on Nursing was enacted.

On motion, duly seconded and carried, the Public Relations Committee was authorized to associate the High School Essay Contest, authorized for the Society, with the contest conducted by the American Association of Physicians and Surgeons.

On motion, duly seconded and carried, a resolution emanating from the Staff of Memorial Mission Hospital relative to preservation of staff appointments for physicians absent in the service of the Armed Forces was received as information and with commendation.

#### Executive Committee Meeting

Raleigh, N. C., March 11, 1951

A called meeting of the Executive Committee of the Medical Society of the State of North Carolina was held at the Sir Walter Hotel, Raleigh, North Carolina, 11:00 A.M., March 11, 1951, a quorum of fourteen being present. The essential considerations and actions were as follows:

On motion, duly seconded and carried, the summarized and written report of the Society Delegates to the Annual and to the Clinical Sessions of the American Medical Association was accepted and commended. (See detail in compilation of annual reports.)

On motion, duly seconded and carried, a minor correction in the budget estimate of revenue and a minor diminishment in the estimate of expenditures were authorized to be made in the official copy of the budget for 1951.

On motion, duly seconded and carried, a resolution of the Spokane (Washington) County Medical Society relating to temporizing the Armed Forces rejection of draftee physicians for physical reasons and recommending the establishment of a reexamination table for such rejections was endorsed.

On motion, duly seconded and carried, a resolution of the North Carolina State Nurses Association requesting the inclusion of adequate nursing service in voluntary non profit prepayment plans was referred to the President and a member "selectee" to confer with a Nurses' Committee on the subject.

On motion, duly seconded and carried, a committee was authorized to draft a resolution to be presented to the House of Delegates and with its sanction, send the same resolution to the Trustees



of the American Medical Association with a plea that they establish some plan whereby the American Medical Association can recognize the Old North State Medical Society—an organization of resident North Carolina licensed Negro physicians.

On motion, duly seconded and carried, the Committee instructed the Executive Secretary to notify all members not having paid 1951 State dues by May 1, 1951, that such unpaid members may be registered as "guest" of the Society rather as "members in good standing" during the 97th Annual Session May 7, 8, and 9, 1951.

On motion, duly seconded and carried, the report of the Liaison Committee to Work with the North Carolina Insurance Commissioner was approved involving the acceptance of two riders, and reopening the health program for members under the age of 60 years without underwriting offered by the Commercial Casualty Company increasing benefits under the so-called "Loyalty Group Policy" existing at the present.

On motion, duly seconded and carried, the report of the Committee on Chronic Illness detailing its activities for the year and recommending that the study of chronic illness be intensified in this State on a long range basis and that the Medical Society take the lead in directing such a study was accepted.

On motion, duly seconded and carried, the Executive Secretary was instructed to compile all exemption requests and issue same to members and to the American Medical Association in accord with the Constitution of the Medical Society of the State of North Carolina.

On motion, duly seconded and carried, a policy restricting a hyphenated component society to the nomination of one Candidate for General Practitioner of the year, was adopted.

On motion, duly seconded and carried, authorized a committee composed of Dr. C. L. Royster, Dr. H. B. Haywood, Dr. W. A. Sams, and Dr. M. D. Hill to meet with Dr. J. W. R. Norton and confer on the question of organization and direction of the Medical aspects of the Civil Defense Program as organized by the Committee on Emergency Medical Service of the State Society.

On motion, duly seconded and carried, it is expressed as the sense of this Committee that only professional qualifications be considered in choosing physicians to treat patients referred by the North Carolina Division of Vocational Rehabilitation.

On motion, duly seconded and carried, the action of the Wake County Medical Society in resolving to establish a George Marion Cooper Memorial Medal to be presented to the essayist delivering the best adjudged paper on public health, preventive medicine, maternal or infant health, at each annual session of the State Society was adopted by the Committee and recommended to the House of Delegates of the Medical Society of the State of North Carolina.

Respectfully submitted,

ROSCOE D. McMILLAN, M.D., President  
and Chairman of Executive Committee

[The report entitled "Medical Society of the State of North Carolina, Annual Report of Executive Committee to the House of Delegates as of May 1, 1951," referred to by President McMillan was tendered (including the 1951 budget).

**Mr. Barnes:** Actions of Executive Committee of Medical Society of the State of North Carolina, Sunday, May 6, 1951, for referral to the House of Delegates:

Amendment to the Constitution: Article IV, Subsection 4, Student Members, was amended to read:

"Any person who is regularly enrolled as a student and candidate for the degree of doctor of medicine in an approved medical school in the State of North Carolina, after he has finished the first two years of medical education, shall be eligible to apply for student membership; also physicians licensed or unlicensed to practice medicine in North Carolina, who are serving as interns or residents in hospitals in North Carolina for the purpose of extending their education and not primarily for remuneration, may become student members of the Society."

Gentlemen, as you will note in your compilation, there is a report of the committee to revise the Constitution and By-Laws as read on first reading last year, as to the Articles in the Constitution which lay over for final action this year, and this further amends the particular section 4, of Article IV that you will ratify when you get to it in this compilation of reports in respect to student members.

[On motion, duly seconded and carried, the amendment to the report was adopted on first reading.]

**President McMillan:** What shall we do with this recommendation?

**Dr. C. F. Strosnider:** I move the adoption of the recommendation.

[The motion was seconded by Dr. Irving E. Shafer.]

**President McMillan:** All in favor let it be known by saying, "aye"; opposed, "no." The recommendation is accepted.

**Mr. Barnes:** The Executive Committee approved the following recommendations of the Insurance Committee:

1. That the compromise settlement reached by the Hospital Saving Association Board of Trustees and endorsed by The Hospital Care Association Board of Trustees concerning the payment of x-ray-pathology-anesthesia benefits in a combined hospital and professional certificate be approved.

2. That Hospital Care Association and Hospital Saving Association be requested to write a proposed companion hospital certificate or a combined hospital-professional certificate satisfactory to both associations with appropriate co-insurance features necessary to control the cost and to curtail abuse, and to submit such proposed certificate to the Insurance Committee within 90 days for consideration, including proposed rates; and that in event they cannot agree on the terms of such a consolidated certificate, that each association be requested to submit its recommendations for such a certificate which it would issue.

3. That the Insurance Committee be and it is hereby authorized and empowered, subject to the approval of the Executive Council of the Society, either to incorporate a Physician's Service company for the purpose of issuing and administering a professional service certificate in accordance with the resolution adopted by the 1950 House of Delegates, or to approve and endorse a similar prepaid medical insurance plan by one or more existing associations or companies, with the provision that the association or company whose plan might be thus approved will follow the recommendations of the committee of this Society with regard to changes to be made in the fee schedule in the light of future experience, and in the settlement of disputed claims for professional fees.

Provided further that the approval or endorsement by this Society or its committee of a prepaid medical service plan issued by any association or company shall not be considered as constituting any restriction of the right and privilege of any individual member of the Society to decline to participate in any plan approved by the Society, or to



participate in any prepaid medical service plan handled by and through any other association or company.

Further in connection with the report of the Insurance Committee, the Executive Committee voted to adopt, in so far as possible, the revision of fees relating to the Ob-Gyn dispute.

The Executive Committee tabled the request of the North Carolina State Nurses' Association for financial assistance in the publication of a resume of the Study of Nursing and Nursing Education, to be entitled "Better Nursing for North Carolina."

The Executive Committee declined to recommend Hospital Care Association for approval by the National Blue Shield Commission.

**Dr. Everett I. Bugg:** Mr. Chairman, I make a motion that a vote on this question be deferred until after the Insurance Committee report.

[The motion was seconded by Dr. Lounsberry.]

**President McMillan:** Those in favor signify by saying, "aye"; opposed, "no." The motion is carried.

The other two were passed. Now the Chair would like to have a motion to accept or reject the recommendations of the Executive Council in regard to the report which was submitted to them in full and gone over in detail and submitted to you as we have outlined.

**Dr. Forest M. Houser:** I move that we accept the report.

[The motion was seconded by Dr. J. B. Anderson, put to a vote and carried.]

#### Committee on Grievances

In conformity with the Constitution and By-Laws as adopted in May, 1950, the Committee on Grievances has been organized. Its members are five available immediate Past Presidents of the Medical Society of the State of North Carolina. They are Dr. Paul F. Whitaker, Senior Member and Chairman, Dr. Oren Moore, Second Senior Member and Vice-Chairman, Dr. W. M. Coppridge, Dr. J. F. Robertson, and Dr. G. W. Murphy, Junior Member and Secretary.

At the time of the writing of this report, three meetings have been held, and there will be at least one other before May, 1951.

As specified in the By-Laws, normal channels have been used to inform the public and the profession as to the existence and the functions of the Committee. The known reaction has been entirely favorable. A statement of procedure is being submitted to the North Carolina Medical Journal for publication.

Seven complaints have been considered by the Committee. Three have been satisfactorily settled. None have been of a character which require that they be referred to the Executive Council or to the Board of Medical Examiners for disciplinary action.

Methods and procedures having been established, it may be anticipated that the committee will function smoothly in succeeding years. Limited experience to date indicates that the committee fills a definite need, and it may be regarded as a satisfactory vehicle for simultaneously strengthening internal profession structure and improving relations with those whom we serve.

Respectfully submitted,

PAUL F. WHITAKER, M. D.,

Chairman

OREN MOORE, M. D.

W. M. COPPRIDGE, M. D.

J. F. ROBERTSON, M. D.

G. W. MURPHY, M. D.

On motion of Dr. B. O. Edwards, seconded by Dr. Ben F. Royal and carried, the report was adopted. (Note that the rules of procedure of the Committee on Grievances were published in the June, 1951, issue of the North Carolina Medical Journal, p. 242.)

#### Committee on Archives of Medical Society History

The Committee on Archives of Medical Society History, appointed by the President, has had two meetings at the time of the writing of this report. Certain members of the Committee have accepted the responsibility of preparing specific, broad phases of the Medical History of the Society of the State of North Carolina and North Carolina Medicine.

The Committee sent through the central office of the Society a communication to the secretary of each County Society a request that they submit a number of names from which the Committee could select one or more men to accumulate historical data on the County level. The response to this communication has been gratifying, although all of the component Societies have not yet been heard from. When all of the responses are in, it is the intention of the Committee to select one or more men in each County to accumulate and record medical history on the County level. A few of these members have already been designated and are now at work. It is the purpose of the Committee to call upon members of the Society who are particularly fitted by knowledge and experience, to aid the Committee in accumulating historical data.

The work of the Committee will of necessity require considerable time, and will proceed slowly. Once all the material is accumulated, the Society as a whole, and this Committee, will be faced with the problem of editing and publishing the material. No recommendations in this connection are made at the present time. It was felt by the Committee that pertinent material should be accumulated, and the problem of editing and publishing be deferred for consideration until a later date.

Respectfully submitted,

PAUL F. WHITAKER, M. D.,

Chairman

K. P. B. BONNER, M. D.

HUBERT B. HAYWOOD, M. D.

CHARLES F. STROSNIDER, M. D.

WILLIAM DeB. MACNIDER, M. D.

On motion of Dr. C. F. Strosnider, seconded by Dr. W. R. Stanford and carried, the report was adopted.

#### Public Relations Committee

The report of the Public Relations Committee will be brief and somewhat general, as a more complete and detailed report will be given by the Public Relations Director, Mr. LeRoy H. Cox.

The work of the committee in general has been a continuation of the work of previous years with an effort being made to expand and improve the activities.

The high school contest was conducted on the same plan as those previously held, but using the title requested by The American Association of Physicians and Surgeons, and cooperating with that organization in their program.

The annual Public Relations Conference was held on December 14, 1950, in Raleigh. Although this conference was very poorly attended the committee feels that it was such an excellent conference that similar conferences held in the future will be better attended. The conference consisted of an afternoon session with a panel of lay speakers on the various subjects of public relations. It was followed by a cocktail party and a banquet that night.

The publication of a Public Relations Bulletin has been inaugurated with what we think is fair success.

There has been a continuation of the distribution of motion pictures to commercial theaters, and also to physicians for demonstration to lay audiences.

There has been intensification of the drive for resolutions opposing Compulsory Health Insurance from medical and lay organizations.

There has been a continued dissemination of information concerning the private practice of medicine to public schools and other interested lay organizations.

There has been a concerted effort to encourage all County Societies to devote one meeting each year to public relations, and also for the inauguration of press-public-radio-physicians dinners on a county level.

It has always been the policy of the Public Relations Committee to cooperate in every way possible with the other committees of the State Society.

It is felt that one of the major functions of the public relations group should be to furnish requested aid to individual doctors, county societies, and to other committees of the State organization.

The Public Relations Committee has cooperated financially with the Rural Health Committee by paying the salary of their Health Educator, Miss Charlotte Rickman. It has also cooperated financially with this committee by appropriating the sum of \$500.00 from its budget for the purpose of the publishing of a booklet on The Accomplishments of the Rural Health Committee. It is a feeling that there is no more efficient public relations department than the Rural Health Committee and its work.

It is suggested that the Public Relations Program of the State Medical Society be conducted during the coming year much along the same lines that it has during the past year. Particular stress should be placed on the improvement of the press-radio-physicians relations, both on the county level and the state level. Attempting to accomplish this, first by joint meetings of different kinds with representatives of these three groups. Particular emphasis should be placed on the annual Public Relations Conference which has proven to be of great value. The great need in this particular incidence being more representative attendance by the public relations representatives from the different county societies and districts. We recommend that all out efforts be continued to get the full cooperation of the individual doctors throughout the state in our program.

Respectfully submitted,

DONALD B. KOONCE, M. D.,

Chairman

AMOS JOHNSON, M. D.

JOHN S. RHODES, M. D.

On motion of Dr. Lester A. Crowell, Jr., seconded by Dr. W. C. Byrd and carried, the report was accepted.

#### Committee on Child Welfare

Nothing has been referred to my committee for action. I shall, therefore, have to report nothing accomplished during the year. We are still holding ourselves in readiness for any referrals.

FRANK HOWARD RICHARDSON, M. D.,  
Chairman

JAY M. ARENA, M. D.

WILLIAM H. BREEDEN, M. D.

On motion of Dr. W. A. Sams, seconded by Dr. Irving E. Shafer and carried, the report was accepted.

#### Committee on Professional and Hospital Relations

The Committee on Professional and Hospital Relations had two meetings in 1950, and three meetings with the Executive Council of the Medical Society of the State of North Carolina. At each of these meetings specific professional and hospital relations problems were discussed.

The Committee is pleased to report that in one instance in which physicians were paying financial tribute to the hospital, under threat of being denied hospital staff privileges, was solved to the satisfaction of the physicians and the governing board of the hospital concerned.

Another instance in which a hospital employed a physician on a salary, sold his professional services to the public for a fee, which resulted in a net profit to the hospital, was also satisfactorily solved at local levels.

Another problem in which a new hospital planning to open had completed arrangements to hire a surgeon on a salary and sell his services was considered. This hospital agreed to abandon this unethical policy and to conform to the ethical principals of the Medical Society of the State of North Carolina.

The Committee is at present negotiating with another hospital operating a collection service plan which compels its staff members to "split fees" with the hospital. Some progress is being made toward a satisfactory solution of this dispute.

Another hospital has given up its former policy of charging an initiation fee to physicians for hospital staff privileges.

Your Committee recommends that since the Medical Society of the State of North Carolina is the guardian of the health of the millions of people in North Carolina, whose health rests in the physicians' hands:

(1) That the Medical Society of the State of North Carolina continue its vigilance and vigorously oppose all plans that make it impossible for a physician to render adequate medical services to his patient.

(2) That any contract or any of its provisions between a physician and hospital causing deterioration of the quality of medical services rendered the public, be thoroughly investigated and corrected.

(3) That a physician should not dispose of his professional services to any corporation, under terms which permit exploitation of the services of the physician for the financial profit of the corporation concerned.

Respectfully submitted,

J. P. ROUSSEAU, M. D., Chairman

ZACK D. OWENS, M. D.

R. H. HACKLER, Jr., M. D.

JAMES S. AYERS, M. D.

J. GROVER RABY, M. D.

F. M. SIMMONS PATTERSON, M. D.

VERNE H. BLACKWELDER, M. D.

POWELL G. FOX, M. D.

CLAUDE B. SQUIRES, M. D.

EDWARD W. SCHOENHEIT, M. D.

On motion of Dr. B. O. Edwards, seconded by Dr. E. R. Hipp and carried, the report was accepted.

#### Committee on Scientific Exhibits

As Chairman of the Committee on Scientific Exhibits, there is little for us to report. This is a new committee, new appointees being Dr. S. T. Alexander of Chapel Hill, N. C., and Dr. Kenneth Cheek of High Point, N. C. It is our function to secure scientific exhibits for the state meeting, and we are in the process of getting such exhibits. Any one in the state who is interested in having exhibits, either as an individual or from an institution or state organization, should write directly to one of the committee members.

LENOX D. BAKER, M. D., Chairman

S. B. ALEXANDER, M. D.

KENNETH M. CHEEK, M. D.

On motion of Dr. W. A. Sams, seconded by Dr. Henderson Irwin and carried, the report was accepted.

#### Committee on Tuberculosis

The Committee on Tuberculosis for the Medical Society of the State of North Carolina endorses the program for the use of BCG vaccine in accordance with the principals as outlined by the National Tuberculosis Association and the American Trudeau



Society. The use of this vaccine would be primarily in those non reactors where tuberculosis would be an occupational hazard and in those individuals who will have known exposure to tuberculosis. During the past few months there has arisen in certain groups doubt as to the efficacy of this vaccine but the facts stand to indicate its proven value.

The committee hopes that it will be possible to establish the one hundred bed unit at Chapel Hill, North Carolina, in proximity to the Medical School and in close coordination with such. It is felt that this unit would serve as a training center for physicians in regards to post-graduate courses in chest disease and as a unique training center for medical students, nurses, house physicians, technicians and all those interested in the field of tuberculosis. It would serve as means for allowing personnel in all of the State Sanatoria to refresh themselves in general medicine by rotating through a period of service in this unit.

With the constant change in ideas as to what constitutes adequate drug therapy in tuberculosis it is urged that the medical profession remain abreast of the newer data as it becomes obviously well established. It is most desirable to tie in the pre-sanatorium treatment with the sanatorium regime if possible. The committee urges further support of the mass survey X-rays as conducted by the State Board of Health and the Division of Tuberculosis under the direction of Dr. William Smith. With the further construction of additional sanatorium beds in the State system, case surveys will really come to their fullest meaning by having facilities for immediate hospitalization as soon as tuberculosis is diagnosed. Attention is called to the known increase in the instance or occurrence of tuberculosis in elderly white male, and it is urged that this be kept in mind. Although the mortality rate due to tuberculosis has steadily declined in our State, it is to be recognized that the morbidity offers figures indicating that pulmonary tuberculosis is still a serious threat and a coordination of effort to further control and eventually eradicate this disease, with the medical profession giving adequate guidance, is urged.

JOSEPH S. HIATT, JR., M.D.,  
Chairman

AVON H. ELLIOTT, M.D.

MERLE D. BONNER, M.D.

On motion of Dr. Claude Milham, seconded by Dr. Watson Wharton and carried, the report was accepted.

**President McMillan:** We return to the Report of the Committee on Prepaid Medical Service Insurance Plan.

#### Committee on Prepaid Medical Service Insurance Plan

At the last meeting of the State Medical Society, a resolution was passed by the House of Delegates, setting up their own corporation to handle the insurance program sponsored by the State Medical Society. The first step was to name a board of directors.

President Roscoe McMillan thought that it would be a good plan to retain half of the old committee on the board. In this idea, I concurred. There would, thus, be men thoroughly experienced with the development of the plan. There would, also, be new men on the board, and the more men in the Society who were familiar with the plan the better. We felt that we needed some new blood.

President McMillan, therefore, appointed the following new men to the board: Dr. Harry L. Brockmann, Dr. G. M. Billings, Dr. J. P. Rousseau, Dr. Arthur London, Dr. E. I. Bugg, Jr., Dr. W. A. Sams and Dr. J. F. Robertson. The old men re-

maining on the board were: Dr. Hart, Dr. Street Brewer, Dr. R. A. White, Dr. John Rhodes, Dr. David Welton, Dr. H. H. Bradshaw and Dr. Norris Smith.

In passing, I should like to pay tribute to the work of Dr. Paul Whitaker, who preceded Dr. Norris Smith on the committee. Dr. Whitaker asked to be relieved, since he was not in active practice. He had made some very valuable contributions and given a great deal of time and thought to the problems involved. His sincerity and clarity of purpose were always manifested.

It is quite pertinent to also state that Dr. Norris Smith, together with his subcommittee of Dr. Brockmann, Dr. Rousseau and Dr. Bradshaw, has made invaluable contributions to the work of the board.

The members who went off the committee and to whom I extend thanks for their time, efforts and sincerity are: Dr. Kenneth Pickerell, Dr. J. E. Jacobs, Dr. H. L. Strickland, Dr. Corbett E. Howard, Dr. M. Barnes Woodhall, and Dr. J. B. Sidbury.

The first meeting of the new board was held in Raleigh on July 29, 1950. It is hardly practical to go into all the details of the many things discussed at that meeting. Only important facts will be mentioned.

Dr. Hart was elected chairman. As pointed out above, Dr. Norris Smith, Dr. Bradshaw, Dr. Rousseau and Dr. Brockmann were asked to serve as a sub-committee with threefold functions: 1. To review the whole fee schedule and to bring it into line as nearly as possible with comparable schedules elsewhere and in particular the Michigan Plan. 2. To work out, if possible, an agreement with Hospital Saving and Hospital Care by which agreement they would operate the plan for us. 3. To work out a certificate for the insured and a participating agreement for the doctors.

Mr. Jay Ketchum, Executive Director of the Michigan Plan, and Mr. Frank Smith, Director of Blue Shield Medical Care Plans, were present at the meeting and offered us a great deal of valuable advice. One other committee was appointed on charter and by-laws to work with our Attorney, Mr. Anderson. These men were Dr. John Rhodes and Dr. Arthur London.

The next meeting of the board was held in Raleigh on November 12th, 1950. Here again, it is not practical to report the many details of that meeting, all of which are duly recorded in the minutes for any one who wishes to review the same. (Copies of the minutes were placed in the hands of each board member.) I shall only mention a few of the highlights.

The most troublesome thing to settle was the old question of X-ray. It was finally decided to pay for X-ray on an outpatient basis, as follows: Five dollars for any emergency X-ray. The patient to pay the first ten dollars of any other X-ray service, as either inpatient or outpatient. The Corporation agrees to pay 50% of any bills over \$10 up to \$40 whether inpatient or outpatient. Above that limit, the patient would be liable. In other words, if the hospital X-ray bill were twenty dollars, the patient would pay fifteen dollars and the corporation five dollars. If the bill were thirty dollars, the patient would pay twenty dollars and the corporation ten dollars. In other words, our maximum liability would be fifteen dollars except for emergency service of five dollars.

It was also decided that it would be unwise to actually file articles of incorporation with the State authorities at this time. It was felt that this might invite some very premature publicity relative to the plan before all the details were satisfactorily concluded. This has proved to be correct, inasmuch as



we have reached a very serious stalemate. I shall explain.

Dr. Smith requested a meeting with the North Carolina Hospital Association board of trustees. This meeting was granted and we met with the Hospital Board on January 19th in Winston-Salem. At the meeting were President Roscoe McMillan, President-Elect Fred Hubbard, Dr. Smith, Dr. Bradshaw, Dr. Rousseau and Dr. Hart. Dr. Smith and myself had previously arranged for Mr. Ketchum, of the Michigan Plan, to be present and he was there. The North Carolina Hospital Association board of trustees were adamant in their previous stand. We asked that for this particular plan and only for this plan (other Blue Cross contracts not to be altered) the X-ray service be left entirely in the Blue Shield or professional certificate and left out of the accompanying hospital certificate. This they wholly refused to do. The only compromise they would consider would be to leave the outpatient X-rays in Blue Shield and the inpatient X-rays in the hospital contract, using the professional schedule of X-ray fees for charges. This, in effect, was no compromise.

The problem is unquestionably economic for the hospitals. They are afraid of losing income. We felt that it would have made little or no difference in income to the hospital or the X-ray men. We felt that any arrangement between the hospital and the X-ray man should be left at a local level. It made no difference to us whether the hospital or the X-ray man or both were designated as payees. However, Blue Cross can do nothing without an agreement between the doctors and the hospitals. It is impossible for Blue Cross to operate without the cooperation of the hospitals. Blue Cross is not responsible for this situation. In the Michigan Plan, the trouble was obviated by an agreement at the inception of their plan, in which the hospitals agreed not to underwrite professional services.

We have, therefore, again reached a very serious stalemate. There is no question in the minds of your board that the State Society should get into the insurance business as little as possible. The most effective underwriting with the least expense and with the most efficient supervision would undoubtedly be through Blue Cross-Blue Shield. We are now in the position of not being able to have either Hospital Saving or Hospital Care underwrite this plan in its present form, for the simple reason that the hospitals will veto it.

If we are to maintain an alliance with Blue Cross for this particular plan, it seems to me that there are only two solutions now: 1. Agree to the proposal by the State Hospital Association that the inpatient X-ray services be left in the hospital contract and the outpatient X-ray services be in the Blue Shield or professional contract. This is not satisfactory to the X-ray men, from whom I have already had a communication. In my opinion, such is unrealistic and selfish on the part of the North Carolina Hospital Association. We readily acknowledge inevitable and recurring X-ray costs to the hospitals and feel they should be compensated. However, even the X-ray men feel hospital X-ray costs in the past have been too high to the patient. I emphasize again your board feels that the financial arrangement between the hospital and the roentgenologist should be left at a local level. All we are asking is that he be eligible to receive a professional fee, since he is helping underwrite the program. If the hospitals wish to break that fee down into hospital X-ray service and professional service components, that can be done. A charge could be made for X-ray service just as for operating room service. The bad feature is that the Hospital Association is unyielding in its determination to have total control over X-ray serv-

ices, including the roentgenologist. Their argument is that the present plan has worked for fifty years and there is no reason to change. They refuse to recognize that conditions have vastly changed in fifty years and deserve a new approach. 2. Let the professional coverage remain as it is and allow the Blue Cross people to write any type of hospital contract to accompany the same which the insured desires. It would then be the responsibility of the Blue Cross not to duplicate benefits. This might be blocked by the North Carolina Hospital Association by refusing cooperation. The Blue Cross Association also says it would greatly increase their costs.

Our plan would be better and it would be far more practical for the Blue Cross to handle if a companion hospital certificate were sold with it. Such could contain proper provision for reimbursement of the hospital for non-professional X-ray services.

We are having another meeting of our board on the 18th to discuss these problems. It probably will not be possible for me to get the results of this meeting into this report prior to March 1st. This is true because these reports must be in the office of the Executive Secretary prior to March 1st.

I still feel that our public relations urgently need this program. I still feel that it reflects the best traditions of medicine. Certainly, our fundamental purpose should be to serve our fellow man in the most efficient and economical way possible.

V. K. HART, M.D., Chairman  
O. NORRIS SMITH, M.D.  
JOHN S. RHODES, M.D.  
HOWARD H. BRADSHAW, M.D.  
J. STREET BREWER, M.D.  
ARTHUR H. LONDON, JR., M.D.  
WILLIAM A. SAMS, M.D.  
JAMES F. ROBERTSON, M.D.  
JAMES P. ROUSSEAU, M.D.  
ROBERT A. WHITE, M.D.  
EVERETT I. BUGG, JR., M.D.  
DAVID G. WELTON, M.D.  
HARRY L. BROCKMAN, M.D.  
GILBERT M. BILLINGS, M.D.

I recognize Dr. O. Norris Smith.

Dr. O. Norris Smith: If there is anything that is clear in the committee it is that we have no business in the insurance business as such.

One of the first important points that you must consider in this type of insurance is the fact that, as insurance becomes more comprehensive, there is an increased usage. In 1935 one out of sixteen people in North Carolina were going into the hospital each year. That ratio held until, in 1940, one out of every ten people covered by their policies was in the hospital.

Then during the war years that incidence increased to one in eight by 1946. It was just a straight hospital insurance.

About two years ago, both North Carolina plans brought out what they called their comprehensive insurance which is their hospital contract plus an indemnity allowance for surgery and certain other items.

This new policy which has been sold for two years is now running an incidence of use of one in five and a half. Our program, which is even more comprehensive, being a service benefit covering the professional fees, is going to increase that ratio still further and it certainly will be higher than one in five and may approach one in four.

It is important, then, to avoid abuse. That is one point that is most important that you understand. If your policy is having a one-in-four usage as compared to another one-in-eight, it is obvious that you have to charge twice the premium, and we would very quickly price ourselves out of the market.



A corollary to that is, if we should market our professional certificate independently, it would very seriously embarrass all insurance companies and associations which are marketing hospital certificates, because their incidence of usage, held by people who bought our professional coverage, would promptly rise. Therefore, the decisions we make on these matters are far-reaching and require a lot of thought. The purpose of insurance is to protect one's self against the uncertain liability of catastrophic illness, not against the expense which the family budget can absorb over a few weeks or months. When such protection reaches 100 per cent, the individual is released from any feeling of caution or economy and is out to take every legal advantage of his insurance policy, as evidenced by the cost of collision insurance on your car. You can get complete coverage for your car which will pay for every scratch and, if you drive a Ford, as I do, it will cost you \$251 a year; but if you will stand for the first \$25 of any accident, you can get the same protection beyond that point for \$101; if you chose the \$50 deductible, you can get it for \$71; and if you pick the \$100 deductible, you can get it for \$51. This medical insurance works somewhat in the same manner.

Medical insurance competition, until recent years, approached the goal of complete coverage for short-term hospitalization. The present trend is toward the introduction of reasonable co-insurance clauses to curtail unnecessary abuse and to curtail the incidence of usage, and thus extend the protection for the same premium to cover the really catastrophic illnesses requiring several months' hospitalization. Some plans even have riders extending up to two years' benefits.

In order to compete with the current insurance on the market, our much more comprehensive certificate must be safeguarded by the co-insurance, perhaps, on abuse items like x-rays, perhaps on the additional admissions, but at any rate we cannot settle the final details until the complete policy is established. Our committee is firmly committed to the policy but we must have co-insurance in it to make it salable.

A number of items in medical care which carry no inherent pain or risk are wide open to abuse by the patient. The well-known abuse of x-ray benefits is such an example and that is the thing that is getting many of the insurance plans in hot water. There is no pain or inconvenience or anything bad about x-rays, sitting up and having your picture taken; in fact there is a good deal of glamor that is sort of nice to tell about later and patients are putting the pressure on you and on me to put them in the hospital to get these free x-rays that they think they are supposed to have while the policy says that they are not entitled to it for diagnostic purposes and the associations expect us to do the policing of the plan, which is all wrong.

It has been shown in other plans that home calls and office calls are not covered by insurance without a big co-insurance element, and we have decided not to bother with them.

The present certificates offer almost unlimited x-ray, laboratory and drug benefits and the doctor is expected to police the abuse. Our certificate purposes to control this abuse by co-insurance on such benefits and by offering the same x-ray benefits outside the hospital that the patient would get if he went in the hospital. That alone would curtail a good deal of hospital abuse. The simplest form of such co-insurance cannot be finally determined until the companion hospital certificate is written out, in order to offer the many broadened benefits of our certificate at a price which can be sold in competition with the existing plans, some form of co-insurance must be incorporated.

Another very important point in this type of program is simplicity of operation. The goal of the Blue Cross plans is to get their overhead down below 10 per cent. Neither of the associations in North Carolina has built up its volume to the point where it can do that. Some of the big plans like Michigan and others are below the 10 per cent and they are pointed to with pride by everybody who is concerned with them, and that is the goal we are working toward.

The minute that you want to put certain qualifications on who can buy it so that the salesman has to investigate and certify to the person's wage scale or something of the sort, you are promptly interfering with the sale, you are increasing the overhead of handling it, and if you introduce other elements that are going to make the handling of claims complicated, that is going to increase the overhead. If you invite a lot of small claims, a small claim takes just about as much time to process and write the check for as a big one, and in that regard, the x-ray co-insurance that our committee has suggested provides that the patient pay the first \$10 of x-ray and we will go 50-50 with him on the next \$30, and then he is responsible for anything beyond that.

We want to put some x-ray benefit in, primarily to incorporate the service schedule of x-ray fees. These fees are somewhat less, it is estimated 25 per cent less, than the prevailing rates now charged. The radiologists have approved it, by and large, and it also has the additional proviso that after the first repeat examination, any further repeats will be charged at half rate.

One of the objections that I have heard from a number of doctors is that this is a period of inflation. I would like to point out that the Michigan Plan was started about ten or eleven years ago and the income ceiling that they first adopted was \$2,500. It was estimated that 80 per cent of the people of Michigan were eligible for service benefits at that ceiling. Now during the past ten years of inflation, they last year found that only 20 per cent of the people of Michigan were still covered with service and, in response to the insistence of the doctors, they put out a companion plan with a ceiling of \$5,000 estimated to cover 80 per cent of the population; so they now have the two plans, one with a \$2,500 level and with a \$5,000 ceiling.

As to the necessity of having a combined hospital-professional certificate, to market this professional policy separately we would have to set up our own insurance company, establish our own sales outlets and service organization. No established insurance company or Blue Cross association or, I doubt, commercial companies, could afford to assist us in such sales when our policy in the hands of their subscribers would radically increase the incidence of usage of their hospital certificate. They could not sell their own hospital certificates at higher rates to those who bought our policy than they did to other people who do not choose to buy our policy. Our certificate is designed to eliminate many of the exclusions, limitations and other irritants commonly encountered in the existing certificate. The companion hospital certificate should be geared to fit these benefits and companion hospital benefits.

We propose to offer 120 days' hospital coverage instead of the usual 60 or 70 days in this area. We are offering service benefits for both surgical and medical care for those whose income limits are below certain ceilings—about 70 to 80 per cent of the population of North Carolina.

We are offering exactly the same professional benefits outside of the hospital as in the hospital, with the exception of medical care, office calls and home calls.



We are offering x-ray and radium therapy for malignancy only. That would be either in or out of the hospital.

We are suggesting coverage at pre-existing conditions after 36 months.

We are offering coverage of the newborn infant under the family certificate. If it has a congenital defect, we think that is a catastrophic illness and deserves protection.

We are proposing coverage of contagious diseases which the existing certificates do not have. We are providing a restricted benefit in the case of polio.

We are proposing coverage for diagnostic admissions through co-insurance. It is not up to the doctor to try to police that sort of provision, and we feel that co-insurance can do it.

Let me give you an estimate on the cost of this program. For the individual, for our professional certificate alone, it would cost him \$1.30 a month. For the family, regardless of the number in the family (and family is defined in the state statutes as the parents and children up to the age of 18), the rate is \$4, or \$48 per year.

The hospital policy will be in addition to that and, as you know, the rates for that runs roughly \$30 or \$35.

Obstetrics is not truly an insurable risk. There is an element of control in it. Twenty per cent of this premium goes for obstetrics. Four patients who want a family policy have to pay the obstetrical rate in order that the fifth person can have his obstetrical benefits. When you get down to a one-in-five chance, it isn't exactly an insurance situation.

Our insurance friends tell us that the public insists that obstetrics be included. The members of our committee who speak for the general practitioners insist that the general practitioners want it in here. We also agree that it is mighty nice, but we can't allow as much as we feel ought to be allowed for obstetrics without bringing this premium out of reach of the public and the only alternative is co-insurance.

No insurance company offers obstetrics as an optional rider. It simply can't be done.

The obstetrician or the practitioner will charge for prenatal care as he sees fit. We offer \$50 as an indemnity toward a ceiling service charge of \$75, or we are putting a \$25 coinsurance on the patient for this obstetrical benefit.

If an obstetrician requires a more experienced specialist to perform a complicated vaginal delivery, each will receive 75 per cent of the stated fee.

Like the operating fee, the obstetrical fee includes up to five days pre-delivery hospital care by the obstetrician. Beyond this limit, the obstetrician is entitled to the medical allowance. If patient is admitted to the hospital and medical care is rendered by the obstetrician for treatment of a non-operative nature, the medical allowance will be paid.

The allowance for D & C for therapeutic abortion is from \$30 up to \$50. The other D & C's remain at \$30.

We want your suggestions, your criticisms, as we are trying to make this policy the best for the patient and the best for the doctors in the state.

Some associations have had a great deal of trouble because doctors are late in sending in their claims. So we adopted this participating agreement that we would accept a smaller percentage reduction if we were unduly tardy in sending in our claims.

In an effort to solve the dilemma that we have been in over the x-ray, pathology and anesthesia coverage of the two companion certificates, this compromise solution was reached, first: In the hospital certificate anesthesia benefits will be allowed when administered by a hospital employee. Pathol-

ogy, x-ray, and irradiation benefits will be mentioned with the notation, "Also see professional part of certificate," where such benefits will be given in detail. Pathology and x-ray services include materials and interpretation. The Association will settle such claims by payment (1) to physicians, (2) to hospitals, or (3) divide payment between both in accordance with proper instructions at the local level, but there will be no duplication of fees.

The second point is the avenue by which we can avoid going into the insurance business. A committee appointed by the Medical Society will have authority to revise the fee schedule for professional services, to establish appropriate fees for unlisted procedures, to settle any disputes with regard to payment of professional fees, and to solicit the underwriting participation of all physicians in the state for the plan.

We are offering a service certificate and I am sure that very few of you would sign away your rights to supervise the fee schedule and the payment of your professional claims to any outside body, but this protects us by retaining that authority in a committee to be appointed through the State Medical Society. This compromise was unanimously approved by the Board of Trustees of Hospital Saving Association and subsequently it has been approved by the Board of Trustees of Hospital Care Association. It also will have to be approved by the Board of Trustees of the North Carolina Hospital Association.

I am sorry to have been so lengthy in this report but I felt it was most important to the success of this plan, and to guide us in our movements of the next twelve months.

The Insurance Committee recommends the adoption of the following resolutions to the House of Delegates:

#### RESOLVED,

1. That the Insurance Committee be continued for another year with authority to improve the proposed Operative Schedule of Fees by correcting inequities which have been pointed out, and to make such alterations in the Subscriber's Certificate and the Physicians' Participating Agreement as may be deemed advisable.

2. That the compromise settlement reached by the Hospital Saving Association Board of Trustees and endorsed by The Hospital Care Association Board of Trustees concerning the payment of x-ray-pathology-anesthesia benefits in a combined hospital and professional certificate be approved.

3. That Hospital Care Association and Hospital Saving Association be requested to write a proposed companion hospital certificate or a combined hospital-professional certificate satisfactory to both associations with appropriate coinsurance features necessary to control the cost and to curtail abuse, and to submit such proposed certificates to the Insurance Committee within 90 days for consideration, including proposed rates; and that in event they cannot agree on the terms of such a consolidated certificate, that each association be requested to submit its recommendations for such a certificate which it would issue.

This also was approved by the Executive Council. It differs from the president's recommendation to you. There are many members of the committee who feel we want to sell this to as many people as possible and we are not yet in a position to cut off a large potential sales outlet.

4. That the Insurance Committee be and it is hereby authorized and empowered, subject to the approval of the Executive Council of the Society, either to incorporate a Physicians' Service company for the purpose of issuing and administering a professional service certificate in accordance with the resolution adopted by the 1950 House of Dele-



gates, or to approve and endorse a similar prepaid medical insurance plan by one or more existing associations or companies, with the provision that the association or company whose plan might be thus approved will follow the recommendation of the committee of this Society with regard to changes to be made in the fee schedule in the light of future experience, and in the settlement of disputed claims for professional fees.

And then there is the additional part that is simply from the legal technicality standpoint, that we are not coercing you or preventing you from doing otherwise.

We propose to ask both the Blue Cross plans to get together and write a combined certificate, either a companion hospital certificate and companion professional certificate, or if we can work it more simple and combine both of them in one certificate and leave in our committee's hands authority over the fee schedule and the payment of professional claims, then we can place the whole thing in the laps of those who know something about the insurance business and keep us out of it. We are asking, subject to the approval of the Executive Council, that we be given authority to proceed along this line and get these answers and analyze it and try to decide what should be done. [Applause]

**President McMillan:** Gentlemen, you have just heard a very forceful presentation by Dr. Smith on insurance. I feel that this should be given a lot of discussion. Is it agreeable to this group to defer action on this until after the dinner?

**Dr. Anderson:** I so move.

[The motion was seconded by Dr. Shafer.]

**President McMillan:** All in favor of the motion let it be known by saying, "aye"; opposed, "no." It is so ordered.

[The meeting recessed at five forty-five o'clock.]

## MONDAY EVENING SESSION

May 7, 1951

The meeting reconvened at eight-thirty o'clock, President McMillan presiding.

**President McMillan:** The House of Delegates will please come to order. We were on the report of the Committee on Prepaid Medical Service Insurance Plan. However, we would like to pass to the report of the Committee on Revision of the Constitution and By-Laws, so that the Nominating Committee can bring in a recommendation for a speaker and vice speaker of the House of Delegates.

**Dr. E. R. Hipp:** I move that we go ahead with the digression and do the necessary business.

[The motion was seconded by Dr. Claude Squires.]

**President McMillan:** All in favor of the motion let it be known by saying, "aye"; opposed, "no." The motion is carried.

[Dr. Henderson Irwin took the chair.]

**President McMillan:** Mr. Chairman, Members of the House of Delegates: The report of the Committee to Revise the Constitution and By-Laws was presented to the Executive Council last evening and was adopted

### Report of Committee to Revise the Constitution and By-Laws

The Committee to Revise the Constitution and By-Laws of the Medical Society of the State of North Carolina calls to the attention of the Delegates of this House of Delegates a report submitted to the first session of the House of Delegates during the Ninety-Six Annual Session of the Society held in Pinehurst on May 1, 1950, wherein a complete revision of the Constitution and By-Laws was recommended. Your attention is further directed to the action of the House of Delegates on May 1, 1950,

wherein the report of the Committee was adopted on first reading as to the revision of the Constitution and By-Laws and to the action of the House of Delegates on May 3, 1950, wherein the report of the committee was adopted on second reading in respect to the revision of the By-Laws alone. To conclude its commission in respect to the revision of the Constitution and By-Laws, the Committee recommends the following action of the House of Delegates:

1. That the report of the Committee in respect to the revised Articles of the Constitution adopted on first reading on May 1, 1950, be finally adopted by the 1951 House of Delegates in the form as presented a year ago and as published as a part of the Transactions of the House of Delegates as appeared in the August, 1950, issue of the North Carolina Medical Journal, pages 454 to 463.
2. That the Constitution, Article VIII, Section 3, be amended by striking from the first and second lines of said section the clause, "except the Speaker and Vice Speaker to the House of Delegates."
3. That Chapter VI of the By-Laws be amended by the addition of two separate sections defining the duties of the Speaker of the House of Delegates and the Vice Speaker of the House of Delegates, respectively, as follows:  
Section 6. The Speaker of the House of Delegates shall preside at the meeting of the House of Delegates and shall perform such duties as custom and parliamentary usage require. He may address the House of Delegates at the opening meeting of all sessions, limiting his address to matters of conduct and procedure in the House. He shall have the right to vote only in the case of a tie.  
Section 7. The Vice Speaker shall officiate for the Speaker in the latter's absence or at his request. In case of death, resignation or removal of the Speaker, the Vice Speaker shall officiate during the unexpired term.

The Committee moves the adoption of this report, this the 7th day of May, 1951.

COMMITTEE TO REVISE THE  
CONSTITUTION AND BY-LAWS,  
ROSCOE D. McMILLAN, M.D., Chairman  
WINGATE M. JOHNSON, M.D.  
L. A. CROWELL, SR., M.D.  
DONNELL B. COBB, M.D.  
WILLIAM M. COPPRIDGE, M.D.  
HUBERT B. HAYWOOD, M.D.

There is just one change, the deletion; so that the Nominating Committee from the House of Delegates shall bring in nominations for a speaker and vice speaker of the House of Delegates. Mr. Chairman, I would like to move the adoption of the Constitution and By-Laws that were passed at meeting of the House of Delegates in May 1950.

[The motion was seconded by Dr. Strosnider.]

**Vice President Irwin:** All those in favor say, "aye"; those opposed, "no." The "ayes" have it.

**President McMillan:** Gentlemen, since this was adopted by the Council, I have received a few proposed changes in the section of the By-Laws concerning the Committee on Grievances and I am going to read these to you.

1. Paragraph (a) to read: "The Medical Society of the State of North Carolina" instead of "state medical society" and that this change be carried throughout the By-Laws.

2. A new paragraph as follows: Each member of the Society shall be furnished a copy of the provisions of this Chapter of the By-Laws pertaining



to the activities of the Grievance Committee and of any amendments thereto, either by individual or by publication in the *Journal* mailed to each member, and the same shall be binding upon every member of the Society within ten days after such notice or publication. In the absence of written notice to the contrary given to the secretary of the Society by any member, all members of the Society shall be deemed to have consented to these By-Laws. Neither the individual members of the Grievance Committee nor the Society shall be held liable by any member of the Society for defamatory or libelous words or statements published by them in good faith and in the performance of their or its duties as members of the Grievance Committee.

3. In Paragraph (e) delete the word "shall" from the second line and substitute the word "may."

4. In Paragraph (f), line 3, delete the word "shall" and substitute the word "may."

5. In Paragraph (i) the following to be added at the end: "This restriction does not apply to the attorney of the Medical Society of the State of North Carolina nor those which may be employed by either party to the complaint."

6. In Paragraph (k) change the first sentence to read as follows: "The secretary of the committee shall acknowledge in writing the receipt of all complaints which have been received in writing." The third line shall be changed to read: "and shall give reasonable advance notice of meeting places and dates to all persons concerned."

7. In Paragraph (l) delete the words "in most cases" from the second sentence.

8. In Section (m) change the third line to read as follows: "and when both parties to the complaint involved agree to accept" and the last line to read "both parties to the complaint."

9. In Section (o) change the last sentence to read as follows: "In the event that any member does not accept the opinion of the Committee on Grievances concerning fees, the matter shall be referred to the Executive Council."

10. In Section (p) the fourth line shall read as follows: "Signatures of the officers and members of the committee."

11. Section (q) rewritten to read as follows: "Both parties to the complaint shall be furnished with a written statement of the final decision of the committee as soon as possible after the completion of the investigation."

12. In Section (r) change the first two lines to read as follows: "Immediately after each meeting of the committee, the acting secretary may prepare . . ."

Gentlemen, this has been submitted as the result of suggestions from the new Grievance Committee. After they have had this thing for one year they would like to change it so that the actions of this Grievance Committee will be more effective.

**Dr. G. Westbrook Murphy:** That represents the collective opinion of the five men who are on this committee with their experience over the period of a year. You will notice that those changes are comparatively minor. It is a question of wording. Only one thing has been added: On advice of counsel, there was one section of it which limits the responsibility of the members of the committee for defamatory remarks that they may make about members in the course of their duties. Aside from that, there is nothing new in it.

**Dr. Strosnider:** I move the adoption of the amendments as presented by the Committee.

[The motion was seconded by Dr. Byrd.]

**Vice President Irwin:** Those in favor of this motion make it known by saying, "aye"; opposed, the opposite sign. So carried.

[President McMillan resumed the chair.]

**President McMillan:** Gentlemen, we will proceed with the order when we adjourned for dinner, that

is, the report of the Committee on Prepaid Medical Insurance Plan.

**Dr. O. Norris Smith:** President McMillan, the only thing I intended to state was the latest report on the participating agreements. As of three days ago, there were 987 who had returned the signed participating agreements. Of the 2,500 members of the State Society, Mr. Barnes tells me that approximately 300 are in public health, in state mental or T.B. positions, and are not doing private practice within the intent of this plan, so that we could say that 1,000 out of 2,200 physicians have indicated their willingness to participate, or roughly 45 per cent.

Generally speaking, in running over the list, it looks as though about 50 per cent of the specialists have signed up in most categories, and I was quite disappointed that only about one-third of the general practitioners have signed up. This whole plan was designed primarily for the general practitioners and we have leaned over backwards to give them equal fees.

[The report was given considerable preliminary discussion in clarification of the proposed plan and its details explained by members of the Committee and delegates.]

**Dr. A. F. Lapsley:** I move the acceptance of the Insurance Committee's report.

[The motion was seconded by Dr. J. S. Holbrook.]

[Considerable discussion ensued on the merits of the plan, its encumbrances upon the participating physician member and in clarification of the report of the Committee as the question before the body. Discussion was pro and con and favorably encouraged by the President from all quarters within the assembled House of Delegates, both delegates and non-delegate members of the Society.]

**President McMillan:** I would like for Mr. Anderson to clarify the point that was raised a while ago about whether the State Society or the individuals, if they sign the participating agreement, would be liable. Do you understand what I mean, John?

**Mr. John Anderson:** Mr. President, I think the members here talk a lot better than any of the lawyers I have heard talk in meetings or even in court. But with regard to the liability of the participating physicians or the Society, if a corporation were formed called the Physicians' Service, the corporation would operate as any other corporation would operate and issue certificates which are contracts with individual subscribers whose claim would be direct against the corporation and would not extend through the corporation because the corporation would be the sole liable party. The participating physician would be liable under his contract with the corporation only to the extent that the funds of the corporation would go so low, because of payment of excessive claims, that the physicians' fees will have to be cut to protect the solvency of the corporation.

The Medical Society, in my opinion, would not be liable because the corporation would stand between it and any individual subscriber.

**President McMillan:** Thank you, Mr. Anderson.

Gentlemen, are you ready for the question? All in favor of the motion let it be known by saying, "aye"; opposed, "no." The "ayes" have it.

[A question was raised from the floor as to the action on the motion; a standing vote was taken and the motion was carried by a vote of 95 to 4.]

**President McMillan:** We will now have a recess for ten minutes in which we will organize the Nominating Committee. Each of the districts will meet and select a member of the Nominating Committee.

[A ten-minute recess was taken during which time the districts chose their members of the Nominating Committee. Dr. Julian Moore asked the old



Nominating Committee to meet at once in the Dutch Room.]

**Dr. C. F. Strosnider:** We have had a rather unusual condition to come up in our Fourth District in that the member of this year's Nominating Committee was called away on account of serious illness in his family. We have, in his stead, elected Dr. Clarence Bailey of Rocky Mount. I move you, sir, that Dr. Bailey's nomination be confirmed by this body, as a substitute for Dr. G. W. Suiter on our present Nominating Committee, for tonight.

[The motion was seconded by Dr. Hugh Matthews, put to a vote and carried.]

**President McMillan:** That clears to get the reports from the districts as to their representatives on the Nominating Committee who will serve for 1951-52.

[The following members were reported as having been elected to the Nominating Committee by their respective districts:]

First District—Dr. John A. Payne, III, Sunbury.

Second District—Dr. E. B. Beasley, Fountain.

Third District—Dr. Graham B. Barefoot, Wilmington.

Fourth District—Dr. Henderson Irwin, Eureka.

Fifth District—Dr. L. R. Hedgpeth, Lumberton.

Sixth District—Dr. P. G. Fox, Raleigh.

Seventh District—Dr. Claude B. Squires, Charlotte.

Eighth District—Dr. George Holmes, Winston-Salem.

Ninth District—Dr. T. W. Seay, Spencer.

Tenth District—Dr. V. H. Duckett, Canton.

**President McMillan:** The report of the Committee to Work with the North Carolina Industrial Commission.

#### **Committee to work with the North Carolina Industrial Commission**

Personal conferences with its individual members have led to the belief that the Industrial Commission as now constituted is intelligent and sincere. The administration of the medical phases of the Workmen's Compensation Act has become much more efficient. The relationship between the Commission and the profession is expected to improve rapidly.

It has long been the aim of this committee to stimulate a plan in which the industrial fee schedule would be more flexible, would permit of direct payments of uncontested fees by carrier to physician and would provide a practical means of review and adjustment of unusual or contested bills.

At least two minor steps have been taken toward the desired plan.

(1) The Industrial Commission, as of January, 1951, authorized the direct payment of fees of less than \$8.00 and where the time lost is not more than one day. This is by way of a trial and the profession should be scrupulously careful to abide by the letter of the regulation. Having become convinced of the good faith of North Carolina doctors, the Commission may be encouraged to expand the limits of direct payments.

(2) As this report is written, a bill providing for an important amendment to the Workmen's Compensation Act has been introduced in the Legislature. If passed it will provide that hospital and medical bills:

(a) Be "fair and reasonable"

(b) Be the same as those prevailing in the community when a similar service is rendered a patient of like economic status and when modified by 100% collectability.

If this should have become law, the profession would again be wise to see that there is no abuse. If it has not become law, we will try again and much

more vigorously in 1953.

Respectfully submitted,

G. W. MURPHY, M.D., Chairman

HUGH A. THOMPSON, M.D.

GEORGE L. CARRINGTON, M.D.

RUSSELL O. LYDAY, M.D.

**Dr. G. Westbrook Murphy:** There is one paragraph which is of sufficient importance to bring it directly to the attention of the House of Delegates. It has long been the aim of this committee, which has been in existence for a number of years, to persuade the Industrial Commission to establish a system comparable to that in force in Kentucky and Virginia whereby fees for this work are paid directly from carrier to physician when they are uncontested. After pleasant and exhaustive conferences with the chairman of the Commission, they have agreed, effective January 1st of this year, that all claims which are \$8 or less, or which do not involve a lost time of more than one day, may be paid directly from carrier to physician without the approval of the Industrial Commission.

This is a small trial step in the direction in which we have been attempting to go. I assume, justifiably, that the success of the plan which we have had will depend to a considerable degree on the way in which the profession reacts to this minor provision. If North Carolina doctors respect this and live up to it in all of its implications so that the Industrial Commission can be persuaded of the good faith of North Carolina doctors, we are reasonably hopeful that, in the course of time, the limits will be raised and eventually we would arrive at that state where the Industrial Commission does not come between the carrier and the doctor in the payment of uncontested bills.

I offer a motion to adopt this report.

[The motion was seconded by Dr. P. G. Fox, put to a vote and carried.]

Report of the Committee on the Coroner System.

#### **Committee on the Coroner System—**

##### **Preliminary Report**

The Committee on the Coroner System, in accordance with the acts of the Society of last May, has continued its work on a proposed bill modifying the existing coroner's system. A final draft of this bill is attached.

The Committee, after consultation with the Committee on Legislation of the Society, is at the present time making every effort to have this bill introduced in the Legislature. Although the Committee has been successful in interesting a number of groups in this undertaking, especially the coroners, it is not possible to say at this time just what will be the outcome of its efforts to get the matter before the Legislature.

A detailed supplementary report of the work of this Committee will be filed as soon as definitive information with respect to the enactment of this legislation can be had.

#### **PROPOSED BILL FOR NORTH CAROLINA GOVERNING POST-MORTEM MEDICO-LEGAL EXAMINATIONS AND INVESTIGATIONS, ETC.**

An act to revise the laws of North Carolina with respect to post-mortem medico-legal examinations, and to that end to amend the General Statutes of North Carolina by adding thereto a new chapter number — creating a Commission on Post-mortem Medico-legal Examinations and Investigations and prescribing its powers, duties, and functions; to provide for the appointment of Medical Examiners and Investigators, and to prescribe their powers, duties, and functions with respect to post-mortem examinations and investigations; to provide for the appointment of District Pathologists, and to prescribe their

powers, duties, and functions with respect to post-mortem medico-legal examinations and investigations; to provide for the disposition of certain dead bodies and of any property or estate of such deceased persons.

The General Assembly of North Carolina do enact:

That the General Statutes of North Carolina be amended by adding thereto a new chapter, number — and — new sections numbered —, as follows:

#### **Section 1. Commission Created**

There is hereby created a commission to be known as the Commission on Post-mortem Medico-legal Examinations and Investigations, which commission shall consist of seven persons, four of whom shall be *ex-officio* members as follows:

The Attorney General.

The Head of the Department of Pathology of the Medical School of the University of North Carolina or a representative designated in writing by such departmental head.

The Head of the Department of Pathology of the Bowman Gray School of Medicine of Wake Forest College or a representative designated in writing by such departmental head.

The Head of the Department of Pathology of the School of Medicine of Duke University or a representative designated in writing by such departmental head:

And three appointive members as follows:

One lay member to be appointed by the Governor; one member to be appointed by The North Carolina State Bar from its membership; and one member to be appointed by The Medical Society of the State of North Carolina from its membership.

The Commission shall elect one of its members as chairman of the Commission.

Regular meetings shall be held at such times as may be determined by the Commission, and special meetings may be called at any convenient time and place upon reasonable notice signed by any three members.

Four members shall constitute a quorum for the transactions of any business coming before the Commission.

The Commission shall have power to make and amend, repeal and promulgate by-laws and necessary rules and regulations not inconsistent with the law for its own government and procedure for the performance of its duties under this chapter.

The members of the Commission shall serve without compensation but shall be paid actual expenses incurred by them in the performance of their duties.

The *ex-officio* members of the Commission shall serve thereon during the tenure of their respective offices. The initial member thereof appointed by the Governor shall serve thereon for a period of four years; the initial member thereof appointed by the Medical Society of the State of North Carolina shall serve thereon for a period of three years; and the initial member thereof appointed by The North Carolina State Bar shall serve thereon for a period of two years. All subsequent appointive members thereof shall serve thereon for a period of four years.

#### **Section 2. Chief Medical Examiner and Investigator**

The Commission shall appoint a Chief Medical Examiner and Investigator for the State of North Carolina who shall be a licensed Doctor of Medicine and a skilled pathologist holding the certificate of the American Board of Pathology in pathologic anatomy to serve at the pleasure of the Commission.

The Chief Medical Examiner and Investigator shall be the executive officer of the Commission, but shall not be a member thereof.

He shall receive a salary of \$10,500 per year, and shall devote his entire time to his official duties.

In the discretion of the Commission he may be vested with the authority of the Commission when it is not in session, but shall at all times be subject to such rules and regulations as it may prescribe.

It shall be the duty of the Chief Medical Examiner and Investigator to attend the meetings of the Commission, to keep a record of such meetings, to attend to the official correspondence of the Commission, to act as custodian of the files and records of the Commission, to receive reports directed to the Commission, to supervise and control post-mortem examinations and investigations and to furnish to appropriate legal agencies pertinent information and reports relating to such investigations.

#### **Section 3. Assistants and Employees**

The Chief Medical Examiner and Investigator, with the approval of the Commission, may employ such professional, clerical, technical, and other assistants as are necessary for the performance of the duties of his office.

The salaries of assistants and employees shall be fixed by the Commission.

All persons employed by the Chief Medical Examiner and Investigator shall be responsible to him and may be removed by him.

#### **Section 4. Payment of Salaries and Expenses**

The salaries of the Chief Medical Examiner and Investigator, and of the personnel in the central office, the expenses of maintaining the central office, and the traveling and other expenses of the members of the Commission and the personnel of the central office shall be paid by the State of North Carolina as provided in Section 18 of this act.

#### **Section 5. Oath and Bond**

Before entering upon the duties of his office, the Chief Medical Examiner and Investigator shall take and subscribe to the oath prescribed for public officers, and an oath of office, and shall enter into bond before the Clerk of the Superior Court of Wake County, in the penalty of \$5,000 conditioned upon Faithful performance of his official duties.

#### **Section 6. Central Office**

The Commission shall establish and maintain a central office under the supervision of the Chief Medical Examiner and Investigator.

The Commission shall provide the Chief Medical Examiner and Investigator with such furniture, equipment, records and supplies as may be required for the establishment and maintenance of the central office.

#### **Section 7. District Pathologists**

The Commission shall have the power to divide the state into districts, and to alter such districts as from time to time the Commission shall see fit, for the more effective administration of its duties under this act. The Chief Medical Examiner and Investigator shall be empowered, with the concurrence of the Commission, to appoint as district pathologists licensed Doctors of Medicine who are skilled pathologists holding the certificate of the American Board of Pathology in pathologic anatomy or eligible for such certification, which certification must be effected within twelve months from the date of appointment.

Each District Pathologist shall serve for a term of four years and until his successor has been appointed and qualified.

It shall be the duty of each District Pathologist to perform a complete autopsy upon the body of the deceased in every case referred to him, and to make pathological studies of such anatomical materials as may be submitted to him by any of the several Medical Examiners and Investigators in his district or by others empowered by this act to make such reference in the performance of their official duties.



The District Pathologist shall prepare a report on every post-mortem examination, and on every pathological anatomical study, in such form as may from time to time be prescribed by the Commission, copies of which he shall deliver to the Solicitor of the judicial district and the coroner of the county wherein the body or any parts of a body of the deceased were found.

For each autopsy performed by reason of reference by a Medical Examiner and Investigator or by others empowered by this act to make such references the District Pathologist shall receive a fee of \$150 to be paid by the county wherein the body of the deceased was found.

For each pathological anatomical report made on materials submitted to him for study the District Pathologist shall receive a fee of \$15 to be paid by the county wherein the anatomical materials were found.

#### **Section 8. County Medical Examiner and Investigator**

The Chief Medical Examiner and Investigator shall appoint, subject to the approval of the Commission, a qualified and practicing physician in each county of the state to serve as medical examiner and investigator for the county to which he may be appointed. Each County Medical Examiner and Investigator may appoint one or more Assistant County Medical Examiners and Investigators, with the concurrence of the Chief Medical Examiner and Investigator. All such Assistant County Medical Examiners and Investigators shall serve at the pleasure of the County Medical Examiner and Investigator who makes such appointment and at the pleasure of the Chief Medical Examiner and Investigator.

Upon the death of any person on or after the effective date of this act from violence, or by suicide or suddenly when in apparent good health, or when unattended by a physician, or in prison, or in any suspicious, unusual or unnatural manner, the County Medical Examiner and Investigator of the county in which the body of the deceased is found shall be notified, together with the coroner, by the physician in attendance, by any law enforcement officer having knowledge of such death, by the undertaker, by a member of the family, by any person present, or by any person having knowledge of such death. A similar procedure shall be followed upon discovery of anatomic materials suspected of being or determined to be parts of a human body.

#### **Section 9. Duties of County Medical Examiner and Investigator**

Upon receipt of notice as specified in Section 8 the County Medical Examiner and Investigator shall in each case make a physical and medical examination of the body or parts of a body which may be found, make inquiries regarding the cause and manner of death, reduce his findings to writing, and promptly make a full report thereof to the coroner of the county in which the body or any parts of a body was found, to the solicitor of the judicial district in which the body or any parts of a body was found, and to the Commission, in each case upon forms or in the manner by the Commission prescribed.

For each investigation under this chapter, including the making of the required reports, the County Medical Examiner and Investigator shall receive a fee of \$15, this to be paid by the county for which he is appointed.

#### **Section 10. When Autopsies and Other Pathological Examinations to Be Performed**

If in the opinion of the County Medical Examiner and Investigator or the Coroner of the county wherein the body or anatomical material is, it is advisable and in the public interest that an autopsy or other

pathological study be made, or if any autopsy or other pathological study is requested by the solicitor or by the judge of the judicial district wherein such body or anatomical material is, such autopsy or pathological study shall be made by the District Pathologist.

In any case of sudden, violent, unexplained or suspicious death, where the body shall be buried without the customary inquest or autopsy being held or performed, it shall be the duty of the coroner of the county in which the body is buried, upon being advised of such facts, to notify the solicitor thereof, who shall communicate the same to the resident judge of the superior court, and such judge may order that the body be exhumed and an autopsy performed thereon by the district pathologist, and the pertinent facts disclosed by the autopsy shall be communicated to the judge who ordered it, for such action thereon as he, or the court of which he is judge, deems proper.

In any case where a body shall be cremated except in compliance with the provision of this act, the coroner of the county in which the death occurred or of the county in which the body was cremated or of the county in which the remains are found, upon being advised of such facts, shall notify the solicitor thereof, who shall communicate the same to the resident judge of the superior court, and such judge may order that the remains of such body be delivered to the district pathologist who shall perform an examination thereof, and the pertinent facts disclosed by such examination shall be communicated to the judge who ordered it, for such action as he, or the court of which he is judge, deems proper.

#### **Section 11. Reports and Records Received as Evidence**

Reports of investigations made by the district pathologist or county medical examiners and investigators or by coroners, and records and reports of autopsies and other pathological studies made under the authority of this chapter, shall constitute public records and be received as prima facie evidence in any court or other proceeding, and copies of records, photographs, laboratory findings and records in the office of the Chief Medical Examiner and Investigator or any district pathologist or any county medical examiner and investigator, or any coroner, when duly attested by the Chief Medical Examiner and Investigator or coroner or district pathologist or county medical examiner and investigator in whose office the same are regularly kept, shall be received as evidence in any court or other proceeding for any purpose for which the original could be received without any proof of the official character of the person whose name is signed thereto.

In every case where any officer under this act shall be called to testify in any case as an expert witness, he shall receive, in addition to his remuneration under this act, the customary expert witness fee, as may be fixed by the trial judge.

#### **Section 12. Disposition of Dead Body or Parts Thereof**

After any investigation provided for herein has been completed, including an autopsy if one is performed, the dead body or parts thereof shall be delivered to the husband or wife of the deceased or to the next of kin or to the nearest known relative or other person charged by law with the duty of burial, in the order named and as known.

If no person claims the body or parts thereof within thirty-six hours the remains shall be delivered by whoever has possession of them to the sheriff of the county or other like law enforcement officer of a city or town within which they presently rest for proper disposition.



The expenses incurred by such officer in the disposition of the remains shall be borne by the county where such remains were found if the deceased person had no known place of residence within the State but if the deceased person was a resident of North Carolina at the time of death such expenses shall be paid by the county of residence.

No such expenses shall be paid until allowed by the Board of County Commissioners.

If the deceased person leaves an estate out of which burial expenses can be paid, either in whole or in part, such estate shall be charged for such purpose before any expense under this section is imposed upon the county.

### **Section 13. Disposition by Sheriff of Property of Deceased.**

If any sheriff shall lawfully come into possession of any money or other personal property of any such deceased person whose death shall have occurred after the effective date of this act, and no person or persons entitled by law to such money or personal property are known or can by reasonable diligence be ascertained, such property other than money shall within two years thereafter be sold by such sheriff at public auction after posting notices in three or more public places in his county for ten days, or in his discretion after advertisement for ten days, by one insertion in a newspaper published or having general circulation in said county, and the proceeds thereof together with any such money, after the payment of all necessary expenses, shall be paid by such sheriff into the State Treasury to the credit of the University of North Carolina.

### **Section 14. When Medical Examiner's Permission Necessary Before Embalming, Etc.**

It shall be unlawful to embalm a dead body, when any fact within the knowledge of, or brought to the attention of, the embalmer is sufficient to arouse suspicion of crime or unexplained causes of death of the deceased, until the written permission of the County Medical Examiner and Investigator has first been obtained.

In any case where it is the duty of the County Medical Examiner and Investigator to view the body and investigate the death of a deceased person, it shall be unlawful to embalm the said body until the written permission of the County Medical Examiner has first been obtained.

No permit for cremation of a body shall be issued by the authority charged therewith until the County Medical Examiner and Investigator shall have certified in writing that he has viewed the body and made personal inquiry into the cause and manner of death and is of the opinion that no further examination or judicial inquiry concerning the same is necessary. For each such certification the County Medical Examiner and Investigator shall receive a fee of \$5, which shall be paid by the person making application therefor.

It shall be unlawful to bury a dead body or to issue a burial permit when any fact within the knowledge of, or brought to the attention of, the undertaker or authority charged with the issuance of burial permits is sufficient to arouse suspicion of crime or unexplained causes in connection with the death of the deceased, until the written permission of the County Medical Examiner and Investigator has first been obtained.

A fee of \$5 shall be paid the County Medical Examiner and Investigator for such certificate by the person making application therefor, and a copy of such certificate shall be promptly filed by the County Medical Examiner and Investigator in the office of the Chief Medical Examiner and Investigator.

### **Section 15. Penalties.**

Any person violating any of the provisions of this section shall be deemed guilty of a misdemeanor, and upon conviction thereof, shall be fined not less than \$100 nor more than \$500.

### **Section 16. Appropriations in Support of This Act.**

In order to carry out the provisions of this act there is hereby appropriated to the Commission on Post-mortem Examinations, out of the general fund in the State Treasury, the sum of \$25,000 or so much thereof as may be necessary, for each year of the biennium beginning as of the effective date of this act. The money hereby appropriated to the Commission shall be paid by the Treasurer on warrants of the Comptroller issued on vouchers signed by the Chief Medical Examiner and Investigator, or by such person or persons as may be designated by the Commission for the purpose.

### **Section 17. Amendments and Repeal.**

Nothing in this act shall be construed as precluding a coroner from holding inquests or taking other steps as provided in G. S. Section 152-7, but all such inquests, investigations and proceedings shall be held and done under and subject to the paramount control and direction of the Chief Medical Examiner and Investigator who is hereby also vested with exclusive power and control over the dead body and all evidence connected with the cause of death, in every case which becomes a matter for official investigation or inquest. To this end Paragraphs 6 and 7 of said G. S. Section 152-7 are hereby repealed, and in lieu thereof the following are substituted:

"6. Immediately upon information of the death of a person within his county under such circumstances as, in his opinion, call for investigation, to notify the Chief Medical Examiner and Investigator and also the County Medical Examiner and Investigator, and thereafter to make such additional investigation as the Chief Medical Examiner and Investigator may direct, including the holding of an inquest and preliminary hearing, if so ordered.

"7. If an inquest or preliminary hearing be ordered, to arrange for the examination thereof of any and all witnesses who may be offered by the Chief Medical Examiner and Investigator or the County Medical Examiner and Investigator."

All other acts and parts of acts, both general and special, including charters of cities and towns, inconsistent with the provisions of this act, are hereby repealed to the extent of such inconsistency.

### **Section 18. Effective Date of This Act.**

This act shall be in full force and effect from and after July 1, 1951.

WILEY D. FORBUS, M.D., Chairman  
ELMUS D. PEASLEY, M.D.  
ISAAC MANNING, JR., M.D.

### **FINAL REPORT OF THE COMMITTEE ON THE CORONER SYSTEM, MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA**

1. For preliminary report on the activities of this committee, see preliminary report submitted March 3, 1951.
2. Subsequent to the filing of the preliminary report, the Committee succeeded in getting before the Legislature the proposed bill establishing in North Carolina a new medicolegal system. Final copy of the bill as introduced in the Legislature is attached. This bill was introduced by Representatives Page and Wiggs of Johnston County under the direct sponsorship of the coroner of Johnston County, Mr. Durwood Creech. The bill was referred to Judiciary 2



Committee of the House, and there was a public hearing before this committee on March 20, 1951. At this hearing the bill was discussed by the following: Dr. Forbus, Chairman of the Committee on the Coroner System; Dr. Watson Wharton, practicing physician speaking for Coroner Creech, who was absent because of illness; Dr. J. W. Norton, State Health Officer; and Mr. Henry Vaughan, Secretary of the association of the County Commissioners. There were present at this hearing about twenty-five other interested parties, including members of the Medical Society's Committee on Legislation, the Head of the North Carolina State Bureau of Investigation, and several representatives of the press. The presentation of the bill to the committee provoked wide discussion among its membership. Interestingly enough, no opposition to the bill developed either within the committee or within those attending the hearing. At the conclusion of the hearing, the bill was referred to a Subcommittee, Chairman, Mr. Marion Parrott, of Kinston, representing Lenoir County.

3. The Subcommittee referred to in Paragraph 2 above reported a substitute bill. In this substitute no basic change in the original bill was made. Certain revisions worked out by the Committee on the Coroner System and the Subcommittee were included. This substitute bill, a copy of which is enclosed, was reported to the main committee about two weeks preceding adjournment of the Legislature. The main committee, after extensive discussion which related not to the bill but to the possibility of its enactment within the short time remaining in the Legislature at this session. The bill was, therefore, reported unfavorably but without prejudice to the Legislature.
4. On the suggestion of Mr. Parrott and other interested legislators, your Committee is at this time cooperating with a group of laymen other than those involved in the original work on the bill toward further study of this legislation and toward systematic preparation for bringing the matter to the attention of the Legislature at its next meeting in 1953. In view of the wide publicity of this proposed legislation which was obtained during the session of the Legislature, it is the opinion of your Committee that no serious difficulty will be experienced in obtaining the proposed legislation at the next meeting of the Assembly. Almost without exception, editorial comment and private comments from influential sources indicated great interest in the legislation and no significant opposition developed in any quarter.
5. Attached is a statement of expenditures of the Committee against its budget as set up with the Society at the 1950 meeting. It is anticipated that a substantial increase in expenses on the part of your Committee will occur in its State wide activities because of the necessity for providing secretarial assistance, desirable publicity, and facility of communication with the many agencies, groups and individuals that are interested in this legislation.

6. Your Committee makes the following specific recommendations:

- a. That the Committee on the Coroner System be continued with instructions to pursue the studies of the problem in hand and to bring to the attention of the next General Assembly appropriate legislation.

- b. That the Committee on the Coroner System be allowed a budget of \$500 to cover the necessary expenses incurred in its activities over the next two years.

WILEY D. FORBUS, M. D.  
Chairman

Dr. O. N. Smith: I move that the report be accepted.

[The motion was seconded by Dr. Claude Milham, put to a vote and carried.]

President McMillan: Report of the Committee on Industrial Health.

#### Committee on Industrial Health

The Industrial Health Committee has had no formal meeting this year. However, it has maintained contact with the division of Industrial Health of the American Medical Association and the Division of Industrial Health of the Public Health Department.

The Committee recommends that objectives of last year again be adopted. It is hoped that the in-coming committee can early in the year have a formal meeting and work out methods of carrying out these objectives.

Respectfully submitted,  
HUGH A. MATTHEWS, M.D.,  
Chairman  
MATTHEW S. BROWN, M.D.  
CLAUDE G. MILHAM, M.D.

[On motion of Dr. Hugh Matthews, seconded by Dr. B. O. Edwards and carried, the report was accepted.]

#### Committee to Cooperate With University of North Carolina on Selection of Medical School Faculty

No full meeting of the Committee has been held, as, until recently, nothing has come up requiring our attention.

Your Chairman recently had a letter from Dr. W. R. Berryhill, Dean, Medical School of the University of North Carolina, stating that he was now ready to proceed with the selection of the heads of the Departments, and asking that we have our Committee, or the members of the Committee in the Specialty concerned, meet with him.

Accordingly on February 18, 1951, the following members of my Committee met with Dean Berryhill in the Faculty Room of the Carolina Inn to consider applicants for the Chair of Medicine and the Chair of Surgery:

Dr. Brockton Lyon	Greensboro
Dr. W. Edwin Miller	Whiteville
Dr. Russell O. Lyday	Greensboro
Dr. David R. Murchison	Wilmington
Dr. Monroe T. Gilmour	Charlotte
Dr. William A. Sams	Marshall
*Dr. Amos N. Johnson	Garland

\*Unable to attend on account of being in South America.

Necessarily, everything which transpired in the meeting was and still is top secret; as it would be very embarrassing to the University Authorities and would greatly handicap their work if the names of those being considered became known.

I feel that I speak for every member of the Committee present when I say that Dean Berryhill was most courteous and cooperative and seemed anxious to have our advice and suggestions.

In the selections made that day for the two Chairs we were all in perfect accord, and I feel that the Medical Profession of the State need have no misgivings as to the part to be played by our Com-

mittee or the caliber of the men to be selected.

Respectfully submitted,

J. F. ROBERTSON, M.D., Chairman  
 WILLIAM M. COPPRIDGE, M.D.  
 BROCKTON R. LYON, M.D.  
 JAMES B. SIDBURY, M.D.  
 ARTHUR H. LONDON, JR., M.D.  
 OREN MOORE, M.D.  
 IVAN M. PROCTER, M.D.  
 HUGH A. THOMPSON, M.D.  
 JAMES H. CHERRY, M.D.  
 VERLING K. HART, M.D.  
 SHAHANE R. TAYLOR, M.D.  
 MONROE T. GILMOUR, M.D.  
 DAVID R. MURCHISON, M.D.  
 RUSSELL O. LYDAY, M.D.  
 G. WESTBROOK MURPHY, M.D.  
 HENRY B. IVY, M.D.  
 W. EDWIN MILLER, M.D.  
 AMOS N. JOHNSON, M.D.  
 WILLIAM A. SAMS, M.D.  
 HAMILTON W. McKAY, M.D.  
 FRED M. PATTERSON, M.D.  
 LOUIS G. BEAL, M.D.  
 THOMAS H. WRIGHT, M.D.

On motion of Dr. J. F. Robertson, seconded by Dr. W. T. MacLaughlin, put to vote and carried, the report was accepted.

#### Committee on Military Service

This Committee has found it unnecessary to meet during the past year.

No demands have been made upon this Committee, nor have conditions arisen which have made it necessary for any action by this Committee to be taken.

The Chairman of this Committee feels that some of the activities of members of this Committee regarding allied purposes should be brought to the attention of the members of the State Medical Society. Many of the functions considered as relating to the Committee on Military Service are now handled by the Volunteer Medical Advisory Committee and the Medical Advisory Committee to the North Carolina Military District.

**North Carolina Volunteer Medical Advisory Committee to the Selective Service System**—The National Advisory Committee on the Selection of doctors, dentists and allied specialists provided for by Public Law 779, 81st Congress, has been established by order of the President.

Pursuant to the responsibility and authority vested in his committee, it was requested that Dr. George W. Paschal, Jr., serve as Chairman of the North Carolina Volunteer Advisory Committee and the other members designated were Dr. J. W. R. Norton, State Health Officer, and Dr. Samuel L. Bobbitt, a dentist representing his profession.

The Chairman of the State Advisory Committee was given authority to appoint such additional members to this Committee as may be necessary to carry out its functions. He was further instructed to appoint such Volunteer Advisory Sub-Committees to serve at State and Local levels as may be necessary, eg., separate committees of physicians, dentists and veterinarians to "give appropriate consideration to the respective needs of the Armed Forces and of the civilian population for the services of" members of their respective professions.

The responsibilities of this Committee are (1) to establish and maintain liaison with the State Director of Selective Service. (2) to advise the Selective Service System concerning the classification of individual members of these health professions, who are subject to classification by Selective Service Boards. (3) to be responsible for carrying out within the

State policies established by the National Advisory Committee.

Prior to the existence of Public Law 779, 81st Congress, requests had been made to the individual or Component County Medical Societies of the Medical Society of North Carolina to establish Committees on Military Service. Among the County Societies in which that request was complied with, the personnel of these Committees was used as a basis for appointing the Local Advisory Committees to the Selective Service System. In those counties in which the Societies had not furnished this office with a Committee on Military Service, a Chairman was appointed.

County Medical Advisory Committees are to serve at a local level to give appropriate consideration to the respective needs of the Armed Forces, and of the civilian population for the services of the members of the respective health professions (doctors, dentists, veterinarians).

The purpose of these Local Committees is to consider the availability and essentiality of members from the medical, dental and allied professions. In considering essentiality generally, three factors are primary: (1) the medical and health needs of the community such as availability of physicians in sparsely settled communities where there is only one physician available, and essential public health services. (2) critical research. (3) professional teaching.

Since the establishment of the Volunteer Advisory Committees within the respective States, the functions of this Committee have been broadened to serve in a similar advisory capacity to the Armed Forces with special reference to members of the respective Reserve Corps.

**Advisory Committee to the North Carolina Military District**—Colonel R. F. Perry, Chief of the North Carolina Military District, has appointed Dr. J. W. R. Norton as Chairman of an Advisory Committee to his office. Dr. George W. Paschal, Jr., is also a member of this Committee.

The Chairman of the Committee on Military Service feels that his Committee has a definite responsibility to the Medical Society of the State of North Carolina. While this Committee, as such, has no particular recommendation to furnish at this time, it is felt that through its members serving on the Committees indicated above, the interest of the members of the Medical Society of the State of North Carolina are duly considered, respected and safe-guarded.

Respectfully submitted,

GEORGE W. PASCHAL, JR., M.D., Chm.  
 HUBERT B. HAYWOOD, M. D., Co-Chm.  
 JOHN W. ROY NORTON, M.D.  
 CLARENCE E. GARDNER, JR., M.D.  
 HAROLD S. CLARK, M.D.  
 MILTON S. CLARK, M.D.

On motion of Dr. Irving E. Shafer, seconded by Dr. George Holmes and carried, the report was accepted.

#### Committee on Medical Protection

This Committee has no report to make.

GEORGE W. PASCHAL, JR., M.D., Chairman

#### Committee on Cancer

There have been two meetings of the Cancer Committee during the past year, the first on July 22, 1950, at Wrightsville Beach, and the second February 25, 1951, at Raleigh. Both meetings were well attended, and the President and Executive Secretary of the State Medical Society, and also representatives of the State Board of Health were present.



At the meeting on Wrightsville Beach a very full and free discussion was had on the proposed survey by the Gastric Mobile Unit which had just been purchased by the State Board of Health, and was being put into use. After much discussion, and after hearing what Doctors Vaughn and Reeves of Durham had to say about it, the Committee voted unanimously to approve the Gastric Cancer Mobile Unit to be used in any locality where the County Medical Society requested it to come, but voted that when a total of 10,000 cases had been X-rayed, a critical study would be made of it again with the idea of trying to evaluate it and determine whether it should be used any further or not.

At the request of the State Board of Health and the American Cancer Society, a sub-committee was appointed from the Cancer Committee to study fees charged to indigent cancer cases which were treated by doctors throughout the State. This sub-committee was asked to draw up a fee schedule to be paid for the care of these indigents, but on account of the limited funds available, this schedule would be nothing more than a token fee. The subcommittee drew up a fee schedule which was approved by the Cancer Committee and was in turn submitted to the Executive Council of the State Medical Society which also approved it.

At the last meeting of our Committee an open and free discussion of the present status of the Cancer Detection and Diagnostic Management Clinics was gone into. The Committee concurred in the feeling that the over all work done by the Clinics has been good and that from a public Relations standpoint the good will created among the laity has been invaluable. There naturally have been some errors and some antagonism created here and there, but the group felt that we should do all in our power to encourage continuation of as many of the Clinics as possible and the establishment of new clinics where they are desired.

A discussion of the proposal by the North Carolina Division of the American Cancer Society to establish a home for incurable, indigent cancer cases was held, and it was felt that such a home would fill a long felt need and that the physicians in whatever locality the home was established should cooperate in giving medical care to the inmates of the home.

A letter was read from the President of the North Carolina Radiological Society asking that the Cancer Committee request that the President of the North Carolina Medical Society appoint a Radiologist on the Cancer Committee. After considerable discussion it was voted to take no action on recommending to the President of the North Carolina Medical Society that he follow any specific plan in appointing members other than the plan laid down in the statute which governs the State Cancer Program.

The Committee instructed the Secretary to write Dr. Charles Cameron, Medical Director of the American Cancer Society asking him to look into the feasibility of putting on at the Memorial Hospital, New York, a Refresher Course for doctors throughout the country desiring to bring themselves up to date on the present status of cancer detection and treatment methods. It was thought that the American Cancer Society might be willing to finance a limited number of doctors in each state for the purpose of attending these Refresher Courses.

The Committee voted also to recommend to all Cancer Clinics and Hospitals that they follow the League of Nations Classification of Carcinoma of

the Uterine Cervix as to the stage of the disease.

Respectfully submitted,

J. F. ROBERTSON, M.D., Chairman  
CHARLES I. HARRIS, JR., M.D.  
HENRY FLEMING FULLER, M.D.  
HAROLD E. WOLFE, M.D.  
ROBERT JAMES RUARK, M.D.  
JAMES F. MARSHALL, M.D.  
H. MAX SCHIEBEL, M.D.  
AUGUST M. OELRICH, M.D.  
JOSEPH S. HOLBROOK, M.D.  
JOHN C. REECE, M.D.  
W. WYAN WASHBURN, M.D.  
R. A. WHITE, M.D.

On motion of Dr. J. F. Robertson, seconded by Dr. F. M. Houser and carried, the report was accepted.

#### Committee to Study and Recommend Publication of an Average Schedule of Medical Fees

This has proven to be an interesting and controversial subject. The Committee is not at this time in a position to offer any report containing recommendations as to a course of procedure.

Respectfully submitted,

G. W. MURPHY, M.D., Chairman  
WILLIAM M. SCRUGGS, M.D.  
W. G. WILSON, M.D.  
LEROY J. BUTLER, M.D.  
WILLIAMSON Z. BRADFORD, M.D.

[On motion of Dr. G. W. Murphy, seconded by Dr. J. B. Anderson and carried, the report was accepted.]

**President McMillan:** The report of the Committee on Rural Health and Education.

**Dr. J. S. Brewer:** Mr. President, the official report of the Committee on Rural Health and Education is in the hands of the secretary and I shall not repeat that here tonight. Also, each doctor in the state has been mailed a little booklet which is illustrative of the work that the Rural Health Committee has been doing during the two or three years since its inception.

I have here tonight two or three persons connected with the Rural Health program whom I wish to present for a few words.

The first person I wish to present is Mr. Aubrey Gates, who is the field representative of the American Medical Association for the Rural Health Committee. Mr. Gates is with the Extension Service of the University of Arkansas and he was loaned on a year's leave of absence to the Association for field work and I am happy to present Mr. Gates.

**Mr. Aubrey D. Gates:** Mr. Chairman, may I commend you and all of your colleagues here in North Carolina on the selection of your Rural Health Committee and congratulate all of you on the very fine piece of work that you have done in this state during the time that they have operated. They have an outstanding program, and you have an outstanding staff. You are setting a pattern for the rest of the nation in the work that you are doing. My congratulations to you! [Applause]

**President McMillan:** Thank you, Mr. Gates.

**Dr. Brewer:** I wish to present Miss Charlotte Rickman, who is a health educator and field worker for the Rural Health Committee of the Medical Society of the State of North Carolina.

**Miss Charlotte Rickman:** Dr. McMillan and Members of the House of Delegates: I told Dr. Brewer that since it was so late, all I would like to do is to get up and say that I would try terribly hard out in the counties not to make the same mistakes next year that we made this year. But I do feel I should take this opportunity to tell you of the splendid cooperation that we are receiving in coun-



ties. We think we have made real progress and we are terribly proud of that progress, but we are prouder still of the people and the doctors who have made that same progress.

During the past year, we enjoyed very much working in Wayne County. That Council in Wayne County has had some difficulty in getting started. It was by far the largest county that we worked in and it is just now beginning to get on its feet. I have been to several of the meetings there lately and we are proud that some 26 agencies are beginning to sit down and plan together—plan together on some of the programs that we are doing.

The county that I have been in since the first of the year is, by far, the largest, almost 100,000 people—I guess it is the second largest county in the state. I went to Robeson County because the president of the Robeson County Medical Society came to our Rural Health Conference last year in Raleigh and said, "Our doctors want to do something about the rural health problem in Robeson County," and they were so insistent that we come there and help them do what little bit we could, that we went there the first of the year.

That medical society appointed a committee of physicians representing the geographic areas of the county, some from St. Pauls, Maxton, Fairmont and Pembroke and the various smaller towns within the county.

I don't know that I have ever had more fun and really a greater opportunity in any county of the state than I have had in working with some of the doctors in Robeson County. Each of those doctors in those smaller towns is inviting all of the leaders of the various communities surrounding the towns and leaders within the community, to sit down with you men to talk over the rural health problems of that area. I went to St. Pauls the other night and watched a young doctor lead the discussion group of 30-some-odd community leaders within his town. He asked them what they felt the health problems were in their community and what we should be doing about it; and those folks came out with a great many things. That doctor showed wonderful democratic leadership. He made a good many friends that night and he sat down with his folks to really do the job.

That is going on in almost every town in Robeson County and we are very thrilled with those results.

I told Dr. Hubbard this afternoon that if the doctors keep doing such a good job as they have been doing there and actually doing the community organization job and health organization job that is to be done, and actually the job in democracy to be done, the Rural Health Committee would very soon be worked out of a job.

I have spent a wonderful year this past year with you and I am very grateful for the opportunity to have worked with you and particularly to have worked with each of the component medical societies where we have been.

One of the rural health programs in North Carolina has been selected by the National Broadcasting Company to kick off a new series of programs called, "All Their Powers." It is a program concerning what is going on in community action in health in the United States. The first program in that series will be the Alexander County story and it will come on next Saturday afternoon at five-thirty and if any of you happen to get home by that time, or if you happen to have a radio in your office, I hope you will listen because I am sure you will hear some of the Alexander County doctors telling about some of the things they have done as regards rural health in their county.

Again, it has been a wonderful pleasure to serve you this past year and I hope that, as an employee and working with the Rural Health Committee, and with the other committees of the Society, we can serve you to an even greater extent next year. Thank you. [Applause]

**Dr. Brewer:** Mr. Chairman, I hate to take so much time but the work of the Rural Health Committee is an important part of the work of the State Medical Society and I think you are entitled to know what is going on. We are proud of what this committee has done, or rather what Miss Rickman has done for the committee. You just heard her tell you of the plans of the National Broadcasting Company. The work of Miss Rickman in North Carolina is attracting national attention. It is also attracting the attention of other agencies in North Carolina and, through a grant of \$1,500 from another agency in North Carolina, we have been enabled to employ a helper, another health educator, to assist Miss Rickman in Robeson County. The fact that another agency has seen fit to contribute \$1,500 is evidence of faith, faith in the North Carolina Medical Society and faith in the program of rural education and health that it is trying to put on, and I want to take just a moment to present this other health educator, Miss Emma Carr Bivens.

**Miss Emma Carr Bivens:** Thank you, Dr. Brewer and Dr. McMillan. It is a real pleasure to be associated with you doctors. It is a thrilling program you are carrying on in rural health and I am proud to be a part of it. Thank you so much.

#### **Committee on Rural Health and Education**

The Committee on Rural Health is encouraged by the reception that Miss Charlotte Rickman, Health Educator and Field Worker for the State Society, has received in the counties and communities where she has gone during the past year. She has devoted the major part of her time to the County of Wayne, where she worked all of last summer and fall, to the County of Greene, where she worked part time during the early winter months, and the County of Robeson, where she is now and has been since the first of the year. Health councils have been organized on the local community level and also on the county level.

In addition to the work in Wayne, Greene and Robeson Counties, Miss Rickman, together with the Chairman of the Committee, attended community meetings sponsored by the local County Medical Society in Halifax, Cumberland, Robeson and Harnett Counties. These county societies showed a great deal of interest in the suggestion that they sponsor the organization of the health councils in their respective counties.

In October, 1950, the Committee met in Chapel Hill with all members present. Several suggestions relative to the work and scope of the committee were received. Miss Rickman made a report of her activities in Wayne County to date. February 23rd and 24th, 1951, four (4) members of the Committee, with Miss Rickman, attended the Sixth Annual Rural Health Conference held in Memphis, Tennessee. Those present regretted that two (2) of the members of the committee were not able to attend. As we sat and listened to the papers and discussion presented to the conference, we could see that we in North Carolina were doing well in regards to rural health and education. In fact, Mr. Gates, Field Worker for the American Medical Association Committee on Rural Health, said that in his opinion the North Carolina Medical Society had done more and shown more interest than any other state medical society. Every comparison we were able to make made us prouder to be from the North Carolina Medical Society.



By the time you read this report, you will have seen the little booklet published by the Committee on Rural Health. That tells in a better way the story of the work of your Rural Health Committee and Miss Rickman.

In conclusion, your Committee wishes to recognize and pay tribute to the splendid pattern and ground work laid by Dr. Fred C. Hubbard and his committee when this work was in its formative stage. Whatever we have accomplished this year is due in large measure to the plans they laid so well. We wish, also, to acknowledge the contributions in advice and money that have been made by the Public Relations Committee of your State Society. We must also acknowledge and express our thanks for the cooperation of Mr. James T. Barnes, Executive Secretary. He has been most cooperative and helpful at all times. The local medical societies, county health agencies and welfare agencies have cooperated most helpfully, and to them we offer our thanks. And finally, the Committee wishes to acknowledge and pay tribute to the splendid work that our Health Educator, Miss Charlotte Rickman, has done. Her work is outstanding and is attracting the attention of health agencies on the National level.

J. STREET BREWER, M.D., Chairman  
CHARLES I. HARRIS, M.D.  
H. B. PERRY, M.D.  
GEORGE BOND, M.D.  
FREDERICK C. HUBBARD, M.D.  
W. P. RICHARDSON, M.D.  
REECE BERRYHILL, M.D.

On motion of Dr. Brewer, seconded by Dr. James H. McNeill and carried, the report was accepted.

**President McMillan:** I am going to appoint as temporary chairman of the Nominating Committee for 1951-52, Dr. L. R. Hedgpeth, of Lumberton.

Report of the Committee on Maternal Welfare.

#### Committee on Material Welfare

The Committee on Maternal Welfare would like to express its regret in the loss of Dr. George M. Cooper, Director of Maternal and Child Health Division, of the North Carolina State Board of Health. His unfailing support in the work of this Committee and his cooperation in the State Board of Health, in Raleigh, has made the Maternal Mortality Survey carried out by this Committee possible. The Committee recognizes the great work that Dr. Cooper has carried forward for many years in the interest of maternal welfare within our State and will deeply feel the loss of this fine man.

The Committee would hereby call the attention of the President and the Executive Committee to the resolution adopted by the Medical Society of the State of North Carolina, May 1, 1946, in which the membership of the Committee was defined to include the Director of the Maternal Welfare Division of the North Carolina State Board of Health. We hereby request appointment of Dr. Cooper's successor as an active member of the Committee on Maternal Welfare of the State of North Carolina.

The radio programs which were prepared through the efforts of the Committee in the interest of public education in the field of maternal health were turned over to Dr. Donald B. Koonce, Chairman of the Committee on Public Relations, of the Medical Society of the State of North Carolina, for distribution to the component County Societies for broadcasts in various sections of the State. Our Committee does not have an exact record of the use of these programs, although we have been advised that they have been broadcast in several areas.

The Maternal Mortality Survey has been continued throughout the past year and 989 deaths which

could be related to pregnancy and childbirth have been investigated by the Committee as of December 31, 1950. Two hundred and two deaths were reported during 1950, representing 124 deaths of colored patients, 75 white patients and three Indians.

The plan of regional meetings by members of the Committee has been continued and maternal mortality meetings have been held by members of the Committee together with groups of interested physicians, in Durham, Fayetteville, Lumberton, Washington and Winston-Salem during the past year.

The following is a statement of the financial condition of the Committee on Maternal Welfare for the year, 1950:

Balance—January 1, 1950 (overdraft)	.....	\$221.85
Receipts:		
North Carolina Medical Society	.....	\$1,280.00
P.D.C. (Salary Supplement)	.....	870.00
		2,150.00
Total Receipts and Balance	.....	1,928.15
Disbursements:		
Salary (Secretary)	.....	1,740.00
Postage	.....	60.00
Office Supplies	.....	32.75
		1,832.75
Balance—December 31, 1950	.....	\$95.40

A meeting of the entire Committee is anticipated at an early date for a review of conditions now existing within the State and to explore possibilities of further expansion of the maternal welfare program.

The members of the Committee will welcome suggestions and criticisms from the County Societies and from the Members of the Medical Society of the State of North Carolina concerning further work which may be undertaken by the Committee.

Respectfully submitted,

FRANK R. LOCK, M.D., Chairman  
J. STREET BREWER, M.D.  
\*GEORGE M. COOPER, M.D.  
ERNEST W. FRANKLIN, JR., M.D.  
HUGH A. McALLISTER, M.D.  
BURNICE E. MORGAN, M.D.  
GEORGE O. MOSS, M.D.  
ROBERT A. ROSS, M.D.  
JOHN C. TAYLOE, M.D.

\*Deceased.

On motion by Dr. Irving E. Shafer, seconded by Dr. J. I. Biggs and carried the report was accepted.

**President McMillan:** Report of Committee on Medical Society Home.

#### Committee on Medical Society Home

There has been no formal meeting of the Committee to locate a home for the State Medical Society. No likely site for a home has presented itself during the past year.

At the present time real estate is at such a high price that it would probably be inadvisable to invest any considerable sum in an office building in Raleigh at this juncture.

If any proposition of a favorable nature is presented, I will get in contact with you immediately and ask you to get the committee together for action. We should consider for the sake of economy of administration and overhead expense a building in connection with the State Board of Pharmacy and the Dental Board.

HUBERT B. HAYWOOD, M.D., Chairman  
IVAN M. PROCTER, M.D.  
WILLIAM M. COPPRIDGE, M.D.  
MILLARD D. HILL, M.D.

On motion of Dr. B. O. Edwards, seconded by Dr. James H. McNeill and carried, the report was accepted.

**President McMillan:** Report of Committee on Home Care of Veterans.

#### Committee on Home Care of Veterans

During the year of 1950 the Veterans Home Care Medical Program continued to function for the care of veterans with service connected disabilities, with payment on a fee basis at a prearranged schedule and with free choice of home town physician by the veteran. The statistics of the year can be summarized as follows:

	Number		Amount	
	1949	1950	1949	1950
To Physicians				
(Outpatient Treatment) .....	15,432	15,918	\$223,389	\$215,685
(Compensation examinations) .....	10,066	8,722	104,639	77,035
(Inpatient) .....	292	233	16,048	13,821
To Hospitals for				
Inpatient Care .....	233	185	17,420	14,927
Professional Private				
Duty Nurses .....		11		747
	26,023	25,069	\$361,496	\$322,215

There was some decrease due to reduction in examinations for compensation purposes. It is definitely felt that this is a favorable development in that it is much better for the compensation examinations to be done by disinterested persons and without the veteran being able to designate his own examiner.

Late in 1950 the governing contract was amended to allow the Association to advance the professional fees of registered private duty nurses. This revision enabled the Hospital Saving Association to authorize services and advance fees to the physicians, hospitals, and private duty nurses for eligible emergency cases.

No major revisions in forms or procedure were made during 1950; however, several minor changes were made as follows:

#### 1. July 1, 1950

- a. Add the following item under x-rays:  
2321-A Upper G. I. Series, including  
one retention film .....\$20.00
- b. Items 2376 through 2381 are eliminated from the schedule and replaced by one examination:  
2376—"interpretation of roentgenograms, per case" ..... 5.00
- c. Item 519—"Proctoscopy or Sigmoidoscopy" is eliminated from the schedule and replaced by the following two items:  
519 Proctoscopy ..... 5.00  
1811 Sigmoidoscopy ..... 10.00
- d. Add the following item under "Thoracic Surgery":  
1921 Thoracentesis ..... 10.00
- e. Delete the following item under "Examinations":  
515 Routine office examination, including treatment ..... 3.00

#### 2. June 5, 1950

- a. Item 1064 Gastric Analysis-Routine Chemical, including test meal with withdrawal of stomach contents (fasting contents only) ..... 5.00
- b. Item 1064-A Gastric Analysis—as above Fractional-2 or more specimens..... 7.50
3. Approved but not yet in effect (Probably will be in effect within the next month).

- a. Item 504 is hereby amended and Item 504-A added, to the schedule of fees of Contracts V1001M-437 and VAm-20656. As listed:  
504—Special ear examination, including audiometric test with chart ..... 10.00  
504A Audiometric test with chart ..... 5.00
4. Recommended but not yet approved
  - a. Routine subcutaneous and intramuscular injections to be under one heading at \$2.00 each.

The most serious disruption of the program occurred during the summer of 1950 due to a temporary shortage of VA funds that made it impossible to issue authorities promptly in accordance with requests from the physicians and veterans. This has been discussed with the officials of the Veterans Administration and Hospital Saving will be notified of shortages before they occur.

Difficulties have been encountered in certain local areas due to veterans residing in that area being called to a local veterans facility for consultation and treatment. This has been discussed with the Hospital Saving Association and with the officials of the Veterans Administration and there is no way that this can be corrected on a local level as it is a policy set down by the officials in Washington that when possible any veteran shall be treated at a veterans facility.

Throughout the year the Hospital Saving Association has done everything possible to facilitate the handling of the paper work necessary and to educate the doctors of the state in the proper request for authorities, etc. A manual "Physicians Guide Fee Schedule" was published and distributed to all members of the medical society as an office reference for the physician and his secretary.

Throughout the year the local Veterans Administration officials have been most cooperative, both with the committee and with the Hospital Saving Association. The program offers the medical profession a central agency for negotiations of contracts in the handling of administrative details. The Hospital Saving Association was able to render home town medical care under this program for the nearly one-half million veterans in North Carolina at an average fee cost of sixty-one cents per veteran. At the present time the Hospital Saving Association received reimbursement on an actual cost basis. One committee meeting was held with representatives from Hospital Saving Association and with the Regional Veterans Administration Chief Medical Officer and Medical Administrative officer and it is certainly the feeling of this committee and of the officials of the Hospital Saving Association, that these officials are most interested in the high quality of medical care rendered by this plan and are ready to cooperate in any way possible to improve the program. Great credit should be extended to the Regional Veterans Administration officials and to the Hospital Saving Association for making this program work under some handicaps.

The present committee is taking the liberty to suggest the following:

1. That a committee of this type be reappointed and continue to function as the representative agency for the North Carolina Medical Society in the conduct of this program.
2. That during the following year the present fee schedule which is now about five years old, be redesigned to offer a more comprehensive break-down of services and to coincide with the accepted national system of coding.
3. When the committee meets that the Regional Veterans Administration Chief Medical Officer



and Medical Administrative Officer be invited to attend the meetings with the representatives from the Hospital Saving Association.

4. That the committee be given authority to revise any part of the fee schedule, to add or eliminate any item from the schedule if deemed advisable.

Respectfully submitted,

EVERETT I. BUGG, JR., M.D., Chairman  
JAMES H. McNEILL, M.D.  
E. McG. HEDGPETH, M.D.

On motion of Dr. Fritz, seconded by Dr. C. F. Strosnider and carried, the report was accepted.

#### Physicians Committee on Nursing

1. The North Carolina Nurses' Association had a membership September 30, 1950, of 3,642.
2. There are now 37 accredited professional schools of nursing in North Carolina. Seven of these are for Negro students.
3. The number of pre-clinical students enrolled in these schools was September 1, 1948: 1,115; Sept. 1, 1949: 1,007; Sept. 1, 1950: 1,001.
4. There are now 8 accredited schools of practical nursing in North Carolina.
5. The theme of the 48th annual convention of the North Carolina State Nurses' Association was **Improving Nursing Service Through Improving Nursing Education**. This is in accord with the Functional Analysis study of the American Nurses' Association. Five years will be devoted to this study. The aim is to ascertain the proper functions and relationships of nurses of all types and thus help determine the quantity and quality of nursing service required for the proper health care of the American people.
6. The report of the North Carolina Committee to study nursing and nursing education was submitted November, 1950. Copies of this can be obtained from the North Carolina Medical Care Commission. Its recommendations for the next ten years are:
  - (1) Educate nurses at 3 levels: professional with B.S. degree; graduates of hospital diploma schools; and practical nurses.
  - (2) Continue a committee to plan, coordinate, and promote efforts to achieve this goal.

The report includes a discussion of the national picture, the problem in North Carolina, and explanation of the recommendations. Also in the appendix is found a summary of the major conclusions and recommendations from the report of Dr. Esther Lucile Brown, **Nursing for the Future**, Russell Sage Foundation, New York. Also included is a summary of the findings and recommendations of the committee on the function of nursing, **A Program for the Nursing Profession**: McMillan Co., New York, 1949.

7. It seems that often the first impulse of the doctor is to object to the changes that take place, though he seldom takes a hand in those changes. It may be well to heed the Proverb: "He that answereth a matter before he heareth it, it is folly and shame unto him."

This committee realizes that the medical profession has no authority to interfere in any way with the manner in which the nursing profession carries on its affairs. This committee might well serve as a liaison between our two professions.

8. Evolution in nursing education and nursing service is being guided by the nursing profession and by laymen, with very little influence from those of us who practice medicine. This is also true of hospital management. Could we not at state, county and hospital levels, have advisory councils with representative nurses, doctors, hos-

pital administrators, and hospital board members to discuss non clinical matters pertaining to the improvement of the care of the patient.

HARRY L. JOHNSON, M.D.  
MOIR S. MARTIN, M.D.  
CLAIBORNE T. SMITH, M.D.  
H. L. BROCKMANN, M.D.

**Dr. Harry L. Brockmann:** Mr. Chairman, I don't like to take up any time at all at this late hour but this is the only opportunity I have to present this. Some time ago, every doctor in North Carolina was supposed to have received a copy of the report of the North Carolina Committee to Study Nursing and Nursing Education. Of course, I don't think many read it through but some of us did. It is very good.

Just last week I received a letter from the North Carolina Nurses Association as chairman of the Committee on Nursing, asking us to help them to publish a brief summary of this report and also a copy of the proposed summary. I have read it over. It is fairly good. It isn't perfect. I think that we should help them get this out. I have consulted every member of the Nursing Committee and they all agree with me.

The cost of it would be \$650. Since it isn't perfect, this committee would like to put just a little reservation on any help we might give them and I would like to read a motion that I wish to make before the House of Delegates: That the State Medical Society contribute one-third of the \$650 necessary to publish and distribute a summary of the report of the North Carolina Committee to Study Nursing and Nursing Education, provided a similar amount is contributed by the North Carolina Hospital Association and by the North Carolina State Nurses Association; and provided that a joint committee of three members from each of these organizations approve the wording and form of the proposed summary.

Gentlemen, this original lengthy report was financed to the sum of about \$650 contributed by the General Education Fund of the Rockefeller Foundation. That money was exhausted in the original report with the exception of a small amount that was used to draw up this summary. The motion is before you.

[The motion was seconded by Dr. Claude Milham.]

**President McMillan:** All in favor of the motion let it be known by saying, "aye"; opposed, "no." The motion is carried.

Report of the Committee on Fees in Industrial Cases.

#### Committee on Fees in Industrial Cases

The Committee on Fees to the N. C. Industrial Commission is a continuation of the Medical Advisory Committee to the N. C. Industrial Commission and has functioned throughout the fiscal year from May 30, 1950, to the present in the capacity of reviewing and arbitrating fees contested by physicians to the N. C. Industrial Commission and advising the Industrial Commission on problems which have arisen pertaining to the medical profession. The members of the Committee are: Dr. R. B. Raney, Durham; Dr. Robert Williams, Raleigh; and Dr. Wm. F. Hollister, Pinehurst, Chairman.

The atmosphere has been a wholesome and pleasant one, and the relationship between the Committee and the Industrial Commission has been on the highest plane. Inequities in the fee schedule have been appreciated by the Industrial Commission as they developed insight into the various problems and Mr. Huskins, the Chairman, has voluntarily offered to



revise the fee schedule, although he does not feel that it should be revised in its entirety at one time. He recommends that the schedule be revised a segment at a time, rather than have an overall revision, so industry, which pays the insurance charges, will not feel that insurance rates are being forced upwards unduly by medical fees. Our Committee is in full agreement with this thought. It should be appreciated by the medical profession that the Industrial Commission can alter the fee schedule at any time they see fit. It should also be known that we have a new Industrial Commission, this being their second year of tenure, and as they have gained knowledge of their work they have developed an insight into the problem of fees. It must be recognized by the medical profession that the Industrial Commission cases are, for the most part, in the low income bracket and the fees are commensurate with fees in general in any given community for this income group.

The Committee on Fees has met with the Industrial Commission three times since the annual State Medical meeting in May, 1950. In each case in which increased fees were recommended by our Committee, the recommendation was accepted without question or reservation on the part of the Commissioners. Fifteen cases were reviewed on June 27, 1950, nineteen cases on October 11, 1950, and twenty-one cases on March 15, 1951.

Certain injustices in the approval of fees seemed to result from the Medical Director's ignorance of current medical practices or his suspicion of overcharging. On the other hand, there are times when a physician contests a fee without being familiar with the fee schedule. For the most part, we think that the fee schedule should be followed with the exception of special conditions, in which case the physician must submit a detailed description of those conditions so they can be considered by both the Industrial Commission and the Committee on Fees. We feel the function of the Committee on Fees has been of value both to the Physician and the Industrial Commission.

The members of the Industrial Commission have expressed pleasure in having such a Committee to work with and hope that it will be continued. We would strongly urge that the Industrial Commission be asked to consult with the Committee on Fees or some like committee that has thoroughly familiarized itself with the fee problem, before any changes in the fee schedule are made.

Respectfully submitted,

WILLIAM F. HOLLISTER, M.D., Chm.  
R. BEVERLY RANEY, M.D.  
ROBERT WILLIAMS, M.D.

Dr. Hollister made the motion to accept this report.

[The motion was seconded by Dr. John Irwin Biggs, put to a vote and carried.]

**President McMillan:** The report on the Moore County Award, by Dr. Rowland T. Bellows.

**Dr. Rowland T. Bellows:** Mr. President and Members of the House of Delegates: As chairman of the Committee for the selection of the winner of the Moore County Award, I have the honor to announce that the committee has selected as the outstanding paper presented at last year's meeting one entitled, "Studies on Experimental Leptospirosis," by Dr. Parker R. Beamer of Winston-Salem.

Dr. Bellows moved adoption.

[The motion was seconded by Dr. George Holmes, put to a vote and carried.]

**President McMillan:** Report of Committee on Postgraduate Medical Study, Dr. W. R. Berryhill.

#### Committee on Postgraduate Study

At the outset it is fair to say that this Committee has been relatively inactive within the past year as far as Committee work and meetings are concerned.

There has been an increasing number of excellent opportunities for the profession to benefit from postgraduate instruction in many areas of the state. Particular attention should be called to the excellent city or county symposia which have now become annual occasions to which the profession in the entire state is invited. Of particular significance are the symposia of the New Hanover County Medical Society, Raleigh Academy of Medicine, and the Winston-Salem and Forsyth County Heart Association, the Watts Hospital Staff, and the Greensboro Academy of Medicine. In addition, the Duke University Medical School Symposium, the Duke Medical Postgraduate Courses, the Southern Pediatric Seminar at Saluda, the North Carolina Academy of General Practice and Duke Medical School Symposium, and seven University of North Carolina School of Medicine extension courses at Morganton, Concord, Raleigh, Rocky Mount, Elizabeth City—Ahoskie-Edenton, Shelby, and North Wilkesboro-Elkin have presented excellent programs and have been well attended.

Also there have been many worthwhile scientific programs arranged by county and district societies throughout the state, which have in general been well attended.

The Committee would again like to call the attention of the sponsoring agencies of all of these postgraduate programs to the fact that it is desirable, in so far as possible, to avoid conflicts in scheduling these meetings. It has been suggested that the Executive Secretary of the State Medical Society be notified as early as possible of the dates of any anticipated meetings, symposia or courses to be presented during the year.

Respectfully submitted

W. R. BERRYHILL, M.D., Chairman  
C. C. Carpenter, M.D.  
W. C. DAVISON, M.D.

On motion of Dr. F. M. Houser, seconded by Dr. C. F. Strosnider and carried the report was accepted.

#### Committee on Emergency Medical Service

The activities of the Committee on Emergency Medical Service of the Medical Society of the State of North Carolina for the year 1950-51 began on July 29, 1950, at which time a regional meeting of eight eastern seaboard states was held in Washington. This meeting was attended by the Chairman of the Committee and, to some degree, guidance on future activities was obtained at this meeting. During the ensuing weeks the Committee itself was organized and in mid August of 1950, the first full meeting of the Committee was held. In September of 1950 a meeting was held of the Committee on Emergency Medical Service and in addition representatives from professions allied to the Medical profession. As a result of these meetings our objectives were clearly defined and steps toward organization of each County Medical Society and subsequent organization of functional medical aid units was proposed. Subsequent meetings of the Committee further consolidated our ideas and in December of 1950 assignments to all of the County Medical Societies were sent out. Following this, the State was divided into five regions, each region comprising two medical districts, and each member of the Committee was given a region to consolidate. Consequently, in early 1950 each Committee member had a meeting of his region with representatives from the various County Medical Societies comprising this region and the



ways, means, and reasons for organization of the Emergency Medical Service in the State was brought out to the County representatives. Shortly thereafter a meeting was held with the Southeast Regional representatives of the American Red Cross in regards to the problem of blood procurement. A satisfactory arrangement in regards to procurement of blood and procurement of blood containers was worked out at that time. In March of 1951 a statewide meeting, with requested representation of every County Medical Society Unit in the State, was held in Greensboro, North Carolina, with significant guidance by people qualified to project the way in the various phases of Emergency Medical Care.

During the year it became obvious that the activities of the Committee should be directed toward the attainment of five major factors:

1. A system of interstate mutual aid.
2. Large quantities of blood must be made available during the early hours of disaster.
3. Supplies and equipment to meet such a disaster would have to come largely from existing stocks (instruments now in hospitals and surgical supply houses and pharmacies).
4. Complete organization of the Medical forces of the State.
5. An effort to dispel the mysticism among both Doctors and lay personnel in regards atomic injuries.

In large measure all of the desired goals have been attained and while a functioning organization is not perfect at this time, certainly the organization as we propose it could function and given several months from this time prior to a disaster the organization should function smoothly.

Throughout the year it has been the wish of the Committee on Emergency Medical Service to disseminate as much information, both to the Medical Profession and to the lay public, as was possible and to maintain liaison between the Emergency Medical program and other phases of Civil Defense.

It is the recommendation of the Committee on Emergency Service that the same Committee be retained for the year 1951-52 with a change in Chairmanship of this Committee, and it is further recommended that Dr. George Watson, of Durham, be made the new chairman of this Committee.

W. W. KITCHIN, M.D., Chairman  
Clinton, North Carolina

W. PAUL SANGER, M.D.  
Charlotte, North Carolina

JAMES S. RAPER, M.D.  
Asheville, North Carolina

CHAUNCEY L. ROYSTER, M.D.  
Raleigh, North Carolina

GEORGE A. WATSON, M.D.  
Durham, North Carolina

**Dr. O. N. Smith:** I move the acceptance of this report with the exception of the naming of his successor.

[The motion was seconded by Dr. E. R. Hipp, put to a vote and carried.]

#### Committee on Legislation

The Legislative Committee met for organization purposes on February 25, 1951. This meeting was attended by the President of the Society, the Executive Secretary and our attorney Mr. John Anderson, a representative of the legal firm of Smith, Leach and Anderson. At this meeting contemplated legislative measures were studied and discussed. Previous to and after this meeting the Committee conferred frequently with various groups interested in legislation affecting the Society and public health.

During the 1951 session of the General Assembly more objectionable bills were introduced than on

any previous occasion. The first bill introduced which affected the practice of medicine was one sponsored by the Chiropractors. This measure sought to enlarge the field of the Chiropractor. It was defeated in Committee. The next was a bill by the Naturapaths which would enable this group to set up an examining board and which would have given them the right to practice medicine, except in minor particulars. This measure was also defeated in Committee. The Chiropractors set in motion a piece of legislation in which they asked for legal authority to sign death certificates. This bill seemed destined to pass but was defeated after it reached the floor of the House, on a minority report. The Opetometrists submitted a most troublesome bill. This measure was instigated for the purpose of securing for this group work incident to the medical care of indigent cases, under the jurisdiction of public agencies, mainly the Blind Commission, Health Department and the Welfare Department. The bill passed the House Committee, the House and one Senate Committee. It was finally defeated upon a referral to a Senate Committee. Further study by the Society to determine why this proposed measure was so difficult to defeat might be beneficial to future Legislative Committees.

An excellent piece of legislation presented by Dr. Forbus of the Coroners Committee was defeated but created a great deal of interest among the members of the legislature and the public generally. This bill failed of passage but it is predicted that it will receive favorable action at the next session of the General Assembly. The Stream Sanitation measure supported by the Society was accepted as a law after receiving many amendments. It will function under the direction of a Committee instead of a Commission. The State Board of Health will administer its provisions.

The Committee would like to offer a suggestion for its possible beneficial effects upon the activities of future committees on Legislation. In as much as carefully made plans are necessary for influencing legislation and a great deal of the time of the Legislative Committee is taken up in formulating such plans, it is suggested that our membership refrain from acting directly with the legislators until they have conferred with the President of the Society who is an ex-officio member, the Executive Secretary or some member of the Committee on Legislation. This does not, of course, mean that a member should hesitate to contact his own representative any time he so desires. Since the cults are becoming more active in their demands and are attempting to encroach more and more upon the field of medicine we may expect an increase in this type legislation from year to year.

The Committee wishes to thank the great number of our membership who have given so graciously of their time and efforts in aiding us in securing laws favorable to the medical profession and to the progress of health in our State. The work of our Executive Secretary has been outstanding. He has, during this legislative session exerted every effort in behalf of the cause and his services have been indispensable. The Society's legal advisor, Mr. John Anderson, deserves praise for his sincere efforts to secure equitable laws for the Profession. Dr. W. A. Sams, the representative from Madison County, the only member of our profession in either House of the Legislature rendered invaluable service. The services of Dr. M. D. Hill, our Secretary, were at all times available and his help was appreciated. He has a wide experience in legislative matters. The Committee was at all times in direct communication with Dr. Roscoe McMillan for his counsel and suggestions.



The Legislative Committee wishes to thank the North Carolina Medical Society for the opportunity to serve in this important capacity.

J. F. OWEN, M.D., Chairman  
R. D. McMILLAN, M.D., Pres. Ex-officio  
M. D. HILL, M.D.  
W. M. COPPRIDGE, M.D.  
GEO. W. PASCHAL, M.D.

On motion of Dr. Irving E. Shafer, seconded by Dr. B. O. Edwards and carried, the report was accepted.

#### Committee on Mental Hygiene

The Mental Hygiene Committee of the State Medical Society has had four meetings in the past year. The committee unanimously endorsed the teaching program suggested by Doctors Hohman and Young, to be set up in our State Hospitals. Six hundred letters were sent out to individuals and organizations over the State and a reprint of Dr. Hohman's paper read before the Medical Society last year.

By paying larger salaries we hope to get more highly trained personnel in our State Hospitals. This will in turn attract the younger man for study, thereby increasing the fields of treatment in these hospitals. Key men in the Legislature were contacted personally and by mail before and during the meeting of the Legislature, to help put this program into effect.

This committee would like to again direct the attention of the Insurance Committee to the fact that mental patients up to date have only a partial insurance coverage, and that in general hospitals who will not accept them, they should have the same insurance coverage as any other ill patient. They should be covered in any hospital whether general, private, or state institution.

We have continued to enjoy a happy working relationship with Board of Medical Examiners. We have given them reports on all patients they requested and helped enter one man into a veterans hospital. It has been noted by three different members of the board that these handicapped physicians seem to be seeking help of their own accord more easily now than ever before. However, we still feel most inadequate in this field.

This Committee in connection with the State Mental Hygiene Society and the Governors' Mental Health Council held a one day institute on October 11, 1950, in Raleigh. This meeting was for lay people in guiding the normal and abnormal child. The attendance registered at both the afternoon and evening meeting was over 400 each, and many did not register.

Several years ago this committee asked that the Committee of each County Society act in an advisory capacity to any member in their Society who was reported acting out of line. In the one instance where this committee asked this county group to act in this capacity they refused.

This committee has been in touch with Mr. E. Z. Jones, Civil Defense Director of the State, and Dr. John Rhodes, President of the Wake County Medical Society and Dr. W. J. Senter, Chairman of the Emergency Medical Committee of Wake County, also with Dr. Chauncey Royster on a similar State committee.

It would appear that plans have not yet been completed for emergency medical care in this area but that these will be coordinated with the State plan as it is being developed. These persons with whom we talked agreed on the advisability of bringing to the attention of the public in various ways, but with little fanfare, the need for some preparation in this regard and for a general alertness, although the

danger of atomic attack does not seem very great in this region.

It would seem that any efforts which can be made at a State level to bring some literature on atomic warfare and also on disaster care through the various doctors throughout the state would be of inestimable help, as well as the plan which is now being developed by the Medical Society. Such literature in regard to atomic warfare can be had from Washington, and we would favor its general distribution at the expense of the Medical Society, if no other means is immediately available.

We also wish to bring both the facilities and needs of the State hospitals to the attention of this Committee and the Emergency Medical Committee so that both in disaster or in time of relative peace we can coordinate our efforts. The State hospitals at the present time, although overcrowded (except at Butner where 1,000 beds remain to be developed), could probably in event of disaster further overcrowd and take patients evacuated to them but would need further assistance from the medical groups in taking care of this group as we do not have a large number of doctors. We might, of course, find it necessary to move some of our own patients from one hospital to another in the event of attack on one of these widely separated points. It does not seem to us, however, that we are in a very good position to organize a mobile group to go out to a disaster area because of the present shortages which we have and the large number of patients already under our care.

In regard to latter need and the problems which the State hospitals are confronted with in financing, I would like to call your attention to the second paragraph of this letter.

ALLYN B. CHOATE, M.D.

Chairman, Mental Hygiene Committee

On motion of Dr. Fritz, seconded by Dr. Hipp and carried, the report was accepted.

**President McMillan:** Report of Committee on Chronic Illness.

#### Committee on Chronic Illness

After preliminary orientation of the members of the Committee, the members conducted independently evaluation of the problem of chronic illness on the national scale. From information furnished by the Commission on Chronic Illness, an independent national agency founded jointly by the American Hospital Association, American Medical Association, American Public Health Association, and American Public Welfare Association, it quickly became apparent that the problem of chronic illness is a vast one and that the situation in North Carolina might vary somewhat from that encountered nationally and especially in the larger cities where most of the information has been collected so far.

Accordingly, your Committee arranged an open public meeting in Chapel Hill, Friday, February 9, to which representatives of national and state agencies concerned in the care of chronic illness were invited. In spite of icy roads and snow the following persons attended: James T. Barnes, Executive Secretary, Medical Society of the State of North Carolina, Raleigh, N. C.; (2) Edward T. Brown, North Carolina League for Crippled Children, Chapel Hill, N. C.; (3) A. L. Chapman, M.D., Regional Medical Director, Federal Security Agency, Public Health Service, Washington, D. C.; (4) A. H. Elliott, M.D., Director, Personal Health Division, North Carolina State Board of Health, Raleigh, N. C.; (5) James W. Fogarty, Executive Secretary, Council of Social Agencies, Greensboro, N. C.; (6) C. Horace Hamilton, Head, Department of Rural Sociology, North Carolina State College of Agriculture and Engineer-



ing of the University of North Carolina, Raleigh, N. C.; (7) Dr. Edwin P. Hiatt, Department of Physiology, University of North Carolina Medical School, Chapel Hill, N. C., as a professional representative from North Carolina Heart Association; (8) Leo P. Krall, M.D., Chief, Heart Disease Control Branch, U. S. Public Health Service, Washington, D. C.; (9) Jack E. McGee, Eastern State Representative, National Foundation for Infantile Paralysis, Chapel Hill, N. C.; (10) Miss Katherine Ormston, Executive Secretary, North Carolina Heart Association, Chapel Hill, N. C.; (11) Frank W. Webster, Executive Secretary, North Carolina Tuberculosis Association, Raleigh, N. C.

A very lively and most informative discussion of the problem in North Carolina was held with all persons present participating. From our study to date we would like to present to the Society the following conclusions and recommendations:

**Definition:** A chronic illness is one which will require some medical supervision over a period of months or years. Since no definite time interval is universally accepted we have chosen 60 days as a convenient dividing line. It should be emphasized that chronic illness occurs at all age groups and must be differentiated from the care of the aged even though the majority of the cases of chronic disease do appear in the older age group.

**Nature of the illnesses:** Based on prevalence, amount of disability, mortality, and invalidism the most important chronic diseases appear to be heart disease, arteriosclerosis, hypertension, neurological disorders, mental disease, arthritis, kidney disease, tuberculosis, cancer, diabetes, and asthma.

**Extent in North Carolina:** No state-wide survey to determine the amount of chronic illness in this State has been attempted. A survey has been conducted covering rural and urban areas of Wake County. A random sample covering 2 per cent of all families, white and non-white, was taken by lay workers. In brief, 158 chronic illnesses lasting more than 60 days were found in each 1,000 persons. If the same rate should prevail over the entire state, at any one time there should be approximately 632,000 cases of chronic illness. These figures check surprisingly well with the estimates of 25,000,000 persons in the United States as a whole—approximately one-sixth of the population.

In Wake County, 10 per cent of those with chronic illness were completely disabled, one-third were partially disabled, and one-third were not disabled. In the nation as a whole, 1,500,000 people are invalids and 7,000,000 have some appreciable disability as the result of chronic disease.

In Wake County the rates of illness were highest among old people and in low income groups. The Wake County figures are again in agreement with the national estimate that 16 per cent of the chronically ill are under 25 years of age, one half under the age of 45 with three-quarters being in the productive years from age 15 to 64.

Additional surveys of limited nature have been conducted in other parts of the State such as the Harnett County one on tuberculosis, syphilis, and diabetes, the Guilford County survey which is yet incompletely analyzed, the Durham Social Planning Council Survey, the League of Crippled Children survey on speech and visual defects in school children. Such information as is available indicates that the trend will follow in general the Wake County and national figures.

**Detection:** Detection of chronic illness is best accomplished through regular periodic complete health examinations by practicing private physicians. Additional cases may be detected by surveys conducted for one reason or another, such as the photo-

roentgen surveys for tuberculosis conducted by State or County public health units or by volunteer agencies such as the North Carolina Tuberculosis Association. Interesting experiments with Multiphasic screening techniques are now being conducted elsewhere in the country; the results should be carefully followed and evaluated in relation to the adaptability of this technique to North Carolina. A discussion of this technique has appeared in the NORTH CAROLINA MEDICAL JOURNAL 11:626-630 (Nov.) 1950 by Dr. Cecil G. Sheps of Chapel Hill. The role of the family doctor, in contrast to that of multiphasic screening clinics, was commented on editorially in the NORTH CAROLINA MEDICAL JOURNAL 11:356-357 (July) 1950.

**Cost of Chronic Illness:** The Wake County survey estimated that the cost of chronic illness in cash outlay exclusive of loss of wages amounted to \$7.14 per capita of population and \$45.18 per case of chronic illness over a six months period. If these same rates prevail in the State as a whole, the annual cost of chronic illness in North Carolina would amount to approximately \$57,120,000. Few accurate estimates for the cost in the United States as a whole are available, but it seems apparent that the chief cause of the tremendous annual expenditure for patent medicines and quack medical care is for treatment of chronic disease.

On the national scale it has been estimated that chronic disease causes nearly a million deaths each year and is responsible for the loss of almost one billion days from productive activity. It is immediately obvious that in a time of national emergency and total war mobilization we can ill afford to lose this tremendous potential increase in production by chronic illness.

**Treatment:** Special facilities are available in the State for the treatment of tuberculosis and mental disease; these chronic conditions will not be considered further in our discussion but a close liaison should be maintained between Committees charged with recommendations on these problems.

Much chronic illness is better taken care of in the home or in nursing homes than in hospitals. Your Committee endorses the national standard of two beds for chronic illness per 1,000 population. We believe that hospital care can be best provided by new wings or floors for the chronically ill in the general hospitals now operating rather than providing separate hospitals for the chronically ill. Our emphasis in the state in the past few years has been directed toward providing hospital care for acutely ill patients in general hospitals or chronically ill patients in tuberculosis and mental hospitals. The special needs and problems of patients with chronic disease should not be lost sight of in competition with the more urgent and dramatic needs of the acutely ill.

We believe it is unwise as well as impractical to consider separate home, office, clinic or nursing service for the chronically ill; their needs are best met by inclusion in a general community program of medical care.

**Rehabilitation:** Rehabilitation of psychiatric patients should be further encouraged and expanded within the frame-work of the existing program for care of the mentally ill.

Advances are being made in the rehabilitation and follow-up of patients convalescing from or with arrested tuberculosis. These measures should be extended.

Convalescence and rehabilitation of the chronically ill must be planned. If the chronically ill are made conscious of their limitations early in the course of the disease and are retrained for new occupations which will permit them to stay within the limits of activity prescribed by their illness, many can maintain or regain economic independence. The



State vocational rehabilitation service is attacking this problem through referral of persons with chronic impairments to existing medical centers in the State. This principle should be expanded and developed to include more facilities specifically designed for rehabilitation and including more facilities for physical medicine.

It has been estimated on a national scale that many disabled persons have required up to \$500 each per year for support from public or private funds. Vocational rehabilitation has cost an average of only \$300 and it is usually not necessary to repeat this capital outlay. The total increase in income of a group of 42,000 disabled persons successfully rehabilitated in 1945, of whom nearly four-fifths were unemployed at the time, was six-fold. It is clear that rehabilitation is economically and socially sound.

**Custodial Care:** Many county homes have become residences for the aged and infirm. Many of the people in them do not require constant medical care and may be better cared for in a foster home, often at a decrease in the cost to the county. Further study should be given to the possibility of utilizing county homes more widely for the care of chronically ill persons needing periodic medical care and rehabilitation necessitating hospital facilities.

The number of private homes for the aged is increasing. This trend should be encouraged since many chronically ill or aged individuals can arrange to pay part or all of their care.

A tremendous growth in nursing homes has taken place in the past few years. Standards of medical care in such nursing homes are widely variable ranging from non-existent or medically unacceptable to good. Some means should be investigated for better standardization and perhaps licensing of nursing homes, perhaps by a state agency.

Nursing homes, such as Heart House in Durham, have found it possible to provide care for as little as \$4.00 per day. In other cities rates of \$28.00 to \$75.00 per week are common.

An analysis of hospital admissions for chronic diseases, conducted with the help of hospital administrators, doubtless would give factual information of considerable value in planning further a program for chronic illness.

**Education:** Physicians need education in the newer techniques for rehabilitation of the chronically ill. Courses are now provided by the American College of Physicians to which key physicians might be sent on scholarships by the medical society or by voluntary health agencies.

The technique of one day symposium or seminar meetings for discussion of problems such as tuberculosis or heart disease, as has been so successfully demonstrated in the State by the North Carolina Tuberculosis Association and the Winston-Salem and North Carolina Heart Association should be encouraged. The possibility of extension courses or clinics sponsored by County medical societies and conducted in local hospitals by a team from some medical center to educate the general physician in the most recent developments in the field of heart disease, arthritis, cancer, kidney disease and so forth might be attempted as a pilot experiment in several areas of the State.

It would be highly desirable to have some central course available for training or nursing home personnel, both private and county home, in order to raise standards of medical care.

Education of patients could be extended through more intensified efforts of county medical societies, health departments, and especially through visiting nurses who see patients in their homes.

Health education in the schools should be encouraged and expanded. Greater participation by

members of the county medical societies in outlining the content and method of presentation of material by health educators or teachers should be expanded.

Education of adults could be furthered by local medical societies working closely with home demonstration clubs. This technique has been found useful in other special phases of medical care.

**Recommendations:** Your Committee recommends that the study of chronic illness be intensified in this State on a long-range basis. We strongly recommend that the Medical Society of the State of North Carolina take the lead in directing such a study, in recommending policies, and in seeking means to implement recommendations and to install techniques already well recognized. The precedence for the Medical Society assuming leadership is already demonstrated by the actions of the Wisconsin, Connecticut, Colorado, and Washington state medical societies.

The chairman of the committee preferably should be a younger man with no other Medical Society duties and few other responsibilities. The enormity of the job of improving the program for care of the chronically ill in the State is apparent and will require all of the time any individual can spare from his practice.

The Committee should be vastly expanded to include physicians from the medical specialties of orthopedics, internal medicine, public health, psychiatry, tuberculosis, physical medicine, neurology, rheumatic diseases, diabetes, cancer, cardiology.

It is recommended that the chairman and a large part of the committee be queried as to their willingness to serve at least three years. Subsequent reappointment by succeeding presidents could then be guided by this willingness and by performance. It will require a good part of a year to learn of the many facets of the problem.

It is recommended that any further surveys which are conducted should be done at local level under the sponsorship of the county medical society with the help of the councils of volunteer agencies, welfare groups, and health departments. Surveys must include both cities and rural areas.

It is apparent that in a time of inflation and national emergency, when materials and supplies will be critically short, programs considered for the future should at once begin to utilize to better advantage existing facilities and resources. In the long range a more comprehensive program for integration with the overall medical care program in the State should be outlined. The lead should be taken by the State Medical Society in determining the magnitude of the problem state-wide, in coordinating the efforts of volunteer and governmental agencies in control of the problem, and in integrating the efforts and plans of agencies such as the Medical Care Commission, working through the Committees already in existence in the State Society. The subsequent committees should consider the advisability of requesting legislation from the next General Assembly setting up a state commission for implementing in any further way an adequate program for attack on the problem.

The magnitude of the problem would justify the Medical Society of the State of North Carolina providing or arranging for funds to support a full time professional worker in this field.

Respectfully submitted,  
EDWARD G. McGAVRAN, M.D.  
EDWARD S. ORGAIN, M.D.  
GEORGE T. HARRELL, M.D., Chm.

Dr. George T. Harrell, Jr.: Mr. Chairman, this report is rather lengthy and is given in detail in the full committee reports. I would simply like to call attention to the fact that the committee felt this was a problem of increasing importance, that



it would continue to increase with the years, that a long-range study should be instituted with positive recommendations, and, toward this end, we recommended that the Society begin to think in long-range terms of chronic illness so that we assume the leadership in this field so that it would not fall by default to governmental agencies. We suggest that the committee chairman should be a man, whom we did not name, who would have few other duties in the Society so that he might devote full time to this over a long period, with the idea that he might continue in the field.

We felt that the committee as now constituted was much too small for the vastness of the problem and should be expanded to include physicians from other medical specialties which would be concerned, and we enumerated those; that, if possible, the chairman be chosen as one who would be willing to serve over a period of years although we recognize that no incoming president could be bound by that.

We recommended that further surveys be conducted at the local level and the sponsorship of the local medical societies, and the results of the surveys so far conducted in the state be included in the report. It is recognized that it may be impossible to implement such a program in much detail at the present time but we felt that we should look toward supporting a full-time professional worker in this field since all the figures seem to indicate this is the growing branch of medical care. I move the report be adopted.

[The motion was seconded by Dr. Irving E. Shafer, put to a vote and carried.]

#### Advisory Committee to the North Carolina Medical Care Commission

This committee has not been active for the past several years. It has held itself in readiness to act when called upon by the Medical Care Commission or the State Medical Society.

During the formative stages of the North Carolina Good Health program this was a large and important Committee. Under the capable leadership of its chairman, Dr. Hamilton W. McKay, the committee marshalled the full support of the State Medical Society in behalf of the Good Health program. Since the Medical Care Commission in 1947 developed its administrative and technical staff, various subcommittees of the commission and this Advisory Committee of the State Medical Society have seldom been called upon to function.

These facts cause us to doubt the desirability of continuing this Committee as it now exists. It is, however, apparent that at times there arise threats to the successful operation of the Medical Care Commission. The Commission may be impaired by insufficient appropriations, by attempts to transfer parts of its program to other departments of the Government, or by changes in its structure.

We believe that it is desirable for the State Medical Society to reorganize this Committee in such a way as to enable it on short notice to consider the policies, objectives and accomplishments of the Commission and thru such means to insure the prompt and vigorous support of the Medical Society to safeguard the integrity of the Commission and its important work. It would seem that the re-organized Advisory Committee to the Medical Care Commission should be composed of or at least include those members of the Medical Care Commission who are nominated by the State Medical Society and appointed by the Governor.

Signed:

JACOB H. SHUFORD, JR., M.D.  
JOHN A. PAYNE, III, M.D.  
HARRY L. BROCKMANN, M.D.

On motion of Dr. Brockmann, seconded by Dr. B. O. Edwards and carried, the report was accepted.

#### PHYSICIAN MEMBERS OF THE N. C. MEDICAL CARE COMMISSION REPORT ON THE PROGRAM AND ACHIEVEMENTS OF THE NORTH CAROLINA MEDICAL CARE COMMISSION DURING THE YEAR TO END

JUNE 30, 1951

by

J. Street Brewer\*, M.D.

Roseboro, N. C.

William M. Coppridge†, M.D.

Durham, N. C.

Harry L. Johnson‡, M.D.

Elkin, N. C.

Reports by the Physician Members of the North Carolina Medical Care Commission who were nominated by the Medical Society have been made annually to the House of Delegates of the Society. They have described the accomplishments of the Commission during the preceding years and its plans for the future.

Since June 30, 1951, will close four fiscal years of the Commission's hospital construction program, a summary of the activities for the entire period is presented:

#### SUMMARY OF FOUR YEARS OF HOSPITAL CONSTRUCTION, JULY 1, 1947, TO JUNE 30, 1951

##### Local General Hospitals:

Year	Number Projects	Number New Hospital Beds Added	Total Cost
1947-1948	14	848	\$ 8,813,430.21
1948-1949	15	869	8,741,577.38
1949-1950	13	1,009	10,879,523.18
1950-1951§	15	813	12,707,593.64
Total	57	3,539	\$41,142,124.41
<b>State-Owned Projects:</b>			
1947-1949	7	527	\$ 2,302,996.22
<b>Nurses Home:</b>			
1949-1950	15	1,051	\$ 3,168,050.00
<b>Health Centers:</b>			
1949-1950	9		529,795.00
1950-1951	10		600,000.00
Grand Total	98	4,066	\$47,742,965.63

\*Nominee of N. C. Medical Society for Membership on N. C. Medical Care Commission and appointed by the Governor 12/10/46 and reappointed July 1, 1949.

†Nominee of N. C. Medical Society for Membership on North Carolina Medical Care Commission and appointed by the Governor 7/17/45, and reappointed July 1, 1949.

‡Nominee of N. C. Medical Society for Membership on North Carolina Medical Care Commission and appointed by the Governor July 1, 1950.

§Tentative.

The thirteen hospitals financed with 1949-1950 funds now under construction are listed below:

#### THIRTEEN HOSPITALS UNDER CONSTRUCTION—THIRD YEAR—1949-'50:

Bertie County, Windsor, 50 beds new; Cabarrus County, Concord, 130-bed addition; Cleveland County, Shelby, 36-bed addition; Burke County, Morganton, Power Plant; Richmond County, Rockingham, 50 beds new; Guilford County, Greensboro, 300 beds new; Rowan County, Salisbury, 88-bed addition; Bladen County, Elizabethtown, 50 beds new; Mecklenburg, Charlotte (Mercy Hosp.), Service facilities.



ties addition; McDowell County, Marion, 60 beds new; Ashe County, Jefferson, 25-bed addition; Robeson County, Lumberton, 120 beds new; Union County, Monroe, 100 beds new.

The following twelve hospital projects have been approved by the Commission for the fourth year (1950-1951) of construction, but up to February 1st, none were under contract:

Buncombe County, Asheville, 250-bed addition; Durham County, Durham (Watts), 150-bed addition; Durham County, Durham (Lincoln) 49-bed addition; Iredell County, Statesville, 20 beds new; Vance County, Henderson, 31-bed addition; Haywood County, Waynesville, 49-bed addition; Davidson County, Thomasville, 38-bed addition; Yadkin County, Yadkinville, 30 beds new; Rockingham County, Reidsville, Service facilities addition; Lenior County, Kinston, 56-bed addition; Granville County, Oxford, 54-beds (2 projects, addition to hospital for whites; one new Negro Hospital).

During the period July 1, 1948, to February 11, 1951 the following eighteen new hospitals were opened to receive patients. The size of each hospital and the date it opened is given:

Roanoke — Chowan Hospital, Hertford, 42 beds, date opened, Nov. 1, 1948; Pungo District Hospital, Belhaven, 20, July 5, 1949; Halifax Community Clinic, Scotland Neck, 20, March 19, 1950; Montgomery County Mem. Hosp., Troy, 40, March 5, 1950; Alexander County Hospital, Taylorsville, 20, May 1, 1950; Washington Co. Mem. Hosp., Plymouth, 20, May, 1950; Chatham Hospital, Inc., Siler City, 50, June 11, 1950; Chowan Hospital, Edenton, 35, August, 1950; Stanly Co. Mem. Hospital, Albemarle, 100, July 9, 1950; Person Co. Mem. Hospital, Roxboro, 60, September 9, 1950; Sampson Co., Mem. Hospital, Clinton, 100, October 8, 1950; High Point Mem. Hospital, High Point, 100 (addition), Dec. 10, 1950; Swain County Hospital, Inc., Bryson City, 20, Oct. 11, 1950; Pitt County Mem. Hospital, Greenville, 120, Jan. 18, 1951; Scotland County Mem. Hospital, Laurinburg, 100, Jan. 1951; Caldwell Mem. Hospital, Lenoir, 100, Jan. 2, 1951; Alleghany County Hospital, Sparta, 20, Jan. 10, 1951; Franklin Mem. Hospital, Louisburg, 50, Feb. 11, 1951.

The Federal allocation of funds for hospital construction to North Carolina for the year 1950-51 was \$3,189,589, about half of the amount of the allocation for the previous year. This reduction, in combination with inflated building costs, has necessarily restricted the Commission's program and caused some delay in programming projects. Federal funds for the year 1951-52 are expected to approximate three and a half million dollars.

The 1949 North Carolina Legislature appropriated \$6,826,972 for the biennium 1949-1951, all of which has been fully encumbered. An appropriation by the Legislature for 1951-1953 had not yet been made up to March 1. The Commission requested \$6,414,042 of State funds for hospital construction for the next biennium, July 1, 1951—June 30, 1953. About 5,000 additional local general hospital beds are needed to meet the United States Public Health Service minimum standards of an average of 4.5 per 1,000 population.

Licensing of all local general and allied hospitals in the State to insure maintenance of proper standards of safety for the patients, sanitation, and general operating procedures was made the responsibility of the Medical Care Commission by the 1949 Legislature. During the past year licenses have been issued to 64.2% of all local general hospitals, containing 94.2% of the existing beds. Only hospitals of 25 beds or more have been issued licenses. The issuance of applications for licensure to the smaller hospitals is now under consideration.

The Division of Sanitary Engineering of the State Board of Health has inspected 172 hospitals and has furnished the Commission detailed reports covering deficiencies noted in sanitation and food-handling activities. Some licenses have been issued conditionally, the improvements recommended by the State Board of Health. The State Insurance Department is also making hospital inspections to insure safety against fire hazards.

Since July 1, 1950, when the general licensing program was inaugurated, 60 hospitals have made major improvements in their facilities for providing patient care. These improvements include improved safety from fire hazards, needed personnel, repairs and enlargements of the physical plants, and purchase of hospital equipment, and nearly all include improvements in sanitation and food-handling facilities. It is in this field of "education for improvement" rather than in the utilization of "police power" that the Commission sees the licensing program exerting a favorable influence on the State's hospital facilities.

The Student Loan Fund of \$50,000 has been fully encumbered with 19 loans, —17 to students of medicine, one to a student of dentistry, and one to a student of nursing. Although approvable applications have been filed by 49 prospective students, no future loans can be made unless funds for the program are supplied by the 1951 Legislature.

During the calendar year, 1950, the Medical Care Commission paid \$234,544 to 83 hospitals for the care of 19,301 certified indigent patients. The Commission is authorized to pay one dollar per day toward the cost of hospitalizing certified indigent patients. In the past only non-profit hospitals were eligible to benefit from the Indigent Care Program. A bill amending the law so that privately owned hospitals would become eligible to participate in the program was to be considered by the 1951 Legislature.

It seems apparent, as of now, that the next two to four years will see the Medical Care Commission's hospital building program virtually completed. If funds become available and the national emergency does not hinder too much the building and construction industry, we should in that time be able to build in North Carolina sufficient hospital beds to meet the minimum estimates of the U. S. Public Health Service.

You will probably ask what will be the fate of the North Carolina Medical Care Commission after the building program is virtually completed. We have no adequate answer to that question. Perhaps it will become somewhat of a supervisory agency, continuing the licensing program and allocating state funds for the care of the indigent sick and also allocating and administering the student loan funds. While the scope of the activities of the Commission will no doubt be contracted to some extent, no one we know expects to see the day when the North Carolina Medical Care Commission will be dissolved and cease to function as a state agency.

J. STREET BREWER, M.D.  
WILLIAM M. COPPRIDGE, M.D.  
HARRY L. JOHNSON, M.D.

Dr. J. S. Brewer: Mr. President, since the official report of the physician members of the North Carolina Medical Care Commission was filed with the secretary, a few things have happened in connection with the recent session of the North Carolina Legislature that I think the Society and doctors in general should know about. I have just jotted them down here and that will constitute my report tonight.



First of all, under the Act creating the North Carolina Medical Care Commission, the State of North Carolina set up a fund of \$50,000 to be loaned to medical students, dental students, nursing students, pharmacy students, to assist them in the study of medicine. That fund has been encumbered. Seventeen medical students are being assisted and one or two dental students and one or two nursing students and I think, if I am not mistaken, a pharmacy student. The Medical Care Commission asked in the recent session of the Legislature, the sum of \$200,000 to continue the program. The Legislature did not grant anything, so there is no new money available to assist students in the study of medicine and dentistry and other subjects. That is No. 1.

No. 2, under the Act creating the North Carolina Medical Care Commission, a sum was set up to assist hospitals in the care of indigent patients, charity patients. That was restricted, though, to hospitals that were publicly owned and operated nonprofit. The Commission found that that was working somewhat of an injustice on the indigent people of the state and some of the counties of the state, because in some counties there were hospitals that were not publicly owned that were not altogether nonprofit, although I suppose their owners would have said they are nonprofit, and truly so, but under the Act passed by the Legislature, the physician did not contribute anything to the care of the charity patients in that county.

We requested the 1951 session of the Legislature to amend that, which they did, and the Commission can now contribute to the charity patient in any hospital in the state.

The Commission asked and received appropriation from the Legislature of \$337,000 yearly for the indigent care program. Heretofore we were restricted to the contribution of \$1 per day. That has been increased to \$1.50 per day. The Commission asked the Legislature for 6 million dollars over the biennium, the next two years, to continue, and I believe that sum would have completed the hospital building program in the state, at least for the present. The Legislature saw fit to grant only 2 million dollars for the two years, 1 million per year, so the hospital building program for the next two years will be restricted to that extent.

I believe the North Carolina Medical Care Commission has done a good job assisting in building hospitals in the State of North Carolina; it has done a good job in other respects. I would like to move the adoption of this report.

[The motion was regularly seconded, put to a vote and carried.]

#### Auxiliary Advisory Committee

I herein respectfully transfer to you from the President of the State Medical Society's Auxiliary her report for the year 1950-1951.

If you will read this report carefully, I am sure you will find that you have every right to be very proud and satisfied with your auxiliary. I am also sure you will feel a greater consciousness of the work that they are doing and find yourselves in a better position to encourage them in more and greater work and to cooperate with them in their undertakings.

Respectfully submitted,  
RACHEL D. DAVIS, M.D. Chairman  
Committee to the Auxiliary of the  
Medical Society of the State of North  
Carolina.  
OLIVIA ABERNETHY, M.D.  
WILLIAM RANEY STANFORD, M.D.

On motion of Dr. Irving E. Shafer, seconded by Dr. E. R. Hipp and carried, the report was accepted.

#### Liaison Committee on Insurance to Work With N. C. Insurance Commissioner

The Liaison Committee on Insurance met at Greensboro on Wednesday, February 28; Doctors Hoover, Lyday and Ross being present.

There were no complaints during the year of 1950 to be considered.

The Committee was of the opinion that 2 meetings each year would suffice.

The Chief business of these meetings should be to: review complaints from members of our Society regarding the handling of their health and accident policies and claims; hear representatives of the various insurance companies regarding their problems with policy holders; study any new proposals and riders which a company wished to submit to our Society as a group or sub-group. This Committee, according to the members understanding of their function, is not directly responsible where individual underwriting is solicited; however, it is anxious to carry any problem to the State Insurance Commissioner.

The greatest benefit is afforded the greatest number of Society members by "group" policies; in financial savings, protection for the so-called "sub-standard" risk and the matter of re-instatement. Such policies are recommended.

It does not appear necessary to have a full letter sent to each insurance company by the Executive Committee with favorable recommendation by this Committee regarding policy contracts and riders. Such a simple endorsement as: "The Liaison Committee on Insurance has reviewed the proposal, riders, and policy contracts of \_\_\_\_\_ Company and recommends it for favorable consideration by the Executive Committee of our Society." In addition certain favorable provisions or possible limitations might be mentioned.

Representatives from World Insurance Company, Mr. C. M. Hooper and the Commercial Casualty Insurance Co., Mr. J. L. Crumpton, were interviewed. Mr. Crumpton presented a new extended benefit rider, a copy of which is attached.

The Committee studied the form and recommend it to the Executive Committee for favorable consideration. Mr. Hooper said that he did not have a new policy or rider to offer at this meeting.

Respectfully submitted,

ROBERT A. ROSS, Chairman

On motion of Dr. O. N. Smith, seconded by Dr. Anderson and carried, the report was accepted.

#### Committee on Venereal Disease

The Committee on Venereal Disease is pleased to report that there seems to be a continued decline in number of new cases in this state. The trend in the treatment of venereal disease seems to be toward more cases being taken care of by the general practitioner. Public Health Officers report a larger number of requests from private physicians for advice and suggestions in the matter of treating patients. Because of this your committee would like to stress the following:

That the educational program not be neglected. Contact investigations should be requested from the local health department.

Follow up of the patient be emphasized by the physician. That an adequate dosage schedule for the treatment of syphilis be strictly adhered to. That the patient be advised of the importance of sufficient dosage when treating gonorrhoea so as to try and abort any syphilitic infection contracted at the same time.

Further efforts will be made to acquaint every

physician in the state with the minimal treatment schedule as provided by the State Board of Health.

Respectfully submitted,

R. BRYANT HARE, Jr., M.D. Chairman  
E. H. ELLINWOOD, M.D.  
R. E. FOX, M.D.

On motion of Dr. C. F. Strosnider, seconded by Dr. F. M. Fouser and carried, the report was accepted.

#### **Committee to Confer with the North Carolina State Board of Health and the Optometrists on the School Health Program**

The purpose of this report is to convey the activities of the committee appointed to confer with the North Carolina State Board of Health and the Optometrists on the State School Program.

We wish to report that the committee has been active during the year. We have had numerous conferences over the telephone and otherwise with each other and with members representing the State Society of Optometrists. A formal meeting was held in Charlotte on November 19. Various matters pertaining to the good of the State Organization of Optometrists and the State Medical Society were discussed.

At the present time throughout the State there are several fairly well organized eye clinics which deal only with certified indigent cases. The Optometrists have suggested that they have some part in the operation of these clinics. Our committee feels that when those operating the clinics can find a place in them for the use of the Optometrists that action will meet the approval of our committee. The general idea being that the clinics would be operated in much the same manner as those eye clinics were during the last World War. The development of this idea may be slow and will be on an entirely voluntary basis.

Another matter taken up in the committee meeting on the 19th, was the question of indiscriminately advertising in the field of the healing arts. Our committee feels that legislative measures should be taken to control advertising and that it probably can be best controlled by the State Board of Health as a separate department with legal authority under an act of the legislature. Our Executive Secretary is familiar with the details of this plan.

We wish to say that at the present time a most cordial relation exists between the organized Optometrists and eye physicians of this state. It is our hope that this relation will continue to improve.

Respectfully submitted,

V. M. HICKS, Chairman  
FRANK SMITH, M.D.  
HARRY BRIGGS, M.D.

On motion of Dr. O. N. Smith, seconded by a member and carried, the report was accepted.

#### **Report of Committee to Collaborate with North Carolina Optometric Society Regarding the Removal of Sales Tax from Prescription Eye Glasses**

The committee arranged and conferred with officials of the North Carolina Department of Revenue on the removal of sales tax on prescription eye glasses. The department declined to revise its regulations on the subject in view of the extensive hearings before the Joint Finance Committee of the 1949 General Assembly which declined to report an amendment to the Revenue Act of that year. Hence held that State policy had been established by the Legislature.

During the General Assembly of 1951 due representations on the subject, conveying the views of the Society, was made to the Joint Finance Com-

mittee of the General Assembly. However, it was not the view of the Joint Finance Committee to recommend changes in the Revenue Act as prevailing and for that reason the tax on prescription eye glasses remains in status quo.

Respectfully,

V. M. HICKS, M.D. Chairman

On motion of Dr. Irving E. Shafer, seconded by Dr. Claude Milham and carried, the report was accepted.

#### **Report of Committee on Publications**

There has not been a meeting of the Committee on Publications since the Annual Sessions of 1950. The Journal has run the course of another volume with all numbers maintaining the achieved standards for scientific excellence and commendable format. A change in the editorial staff had its impact in the early fall of 1950, but the office of the Editor adjusted to this situation and through an experienced replacement has continued its progress without difficulty or interruption.

Respectfully submitted,

M. D. HILL, M.D. Chairman

On motion of Dr. J. E. Hemphill, seconded by Dr. Hipp and carried, the report was accepted.

#### **Report of Committee to Arrange Facilities for the Annual Session**

In conformity with the recommendations of the Nominating Committee, adopted by the 1950 House of Delegates, the Committee desires to report that arrangements were duly completed and developed to accommodate the 97th. Annual Sessions at Pinehurst. The entire accommodations of the Community have been engaged to promote the Society's educational assembly and the entertainment of members and guest.

Respectfully,

M. D. HILL, M.D. Chairman  
Committee on Arrangements

On motion of Dr. B. O. Edwards, seconded by Dr. E. R. Hipp and carried, the report was accepted.

#### **Report of Committee on Scientific Work**

In cooperation with the President and the several chairmen of the Scientific Sections, a well rounded program of scientific subjects has been incorporated in the agenda of the Society. The official program is now in course of being dispatched to the members in advance of the Annual Session date. Recognition is made of the marked efforts of your Headquarters Office in the devising of the program and we commend the scientific material to the consideration of every member of the profession in the State and to the Society in particular.

Respectfully,

MILLARD D. HILL, M.D. Chairman  
Committee on Scientific Work

On motion of Dr. George Holmes, seconded by J. B. Anderson and carried, the report was accepted.

**President McMillan:** Report of Committee on Crime and Psychiatry, Dr. Leslie B. Hohman, chairman. A written report was not filed. Is Dr. Hohman present? Dr. Hohman is not in the room. The committee did not file a report with the Executive Council. Therefore, there is no report made.

Is there any new business? Any unfinished business? If there is no unfinished business, are there announcements. [Announcements]

If there is no further business, I now declare the first meeting of the House of Delegates adjourned.

[The meeting adjourned at eleven-twenty o'clock.]



## WEDNESDAY AFTERNOON SESSION

May 9, 1951

The second meeting of the House of Delegates convened at four-thirty o'clock in the Small Card Room, Dr. Roscoe D. McMillan, president of the Society, presiding.

**President McMillan:** Gentlemen, the meeting will come to order. We will have the report of the Nominating Committee, Dr. Julian A. Moore, chairman.

**Dr. Julian A. Moore:** Mr. President and Members of the House of Delegates: Your Nominating Committee presents the following report:

President-Elect: Dr. J. Street Brewer, Roseboro.  
First Vice President: Dr. Forest Houser, Cherryville.

Second Vice President: Dr. A. L. Daughtridge, Rocky Mount.

Speaker of House: Dr. Roscoe D. McMillan, Red Springs.

Vice Speaker of House: Dr. Paul F. Whitaker, Kinston.

**Board of Health (Four year term):**

Dr. G. Grady Dixon, Ayden

Dr. G. Curtis Crump, Asheville

**Delegates to Virginia Medical Society:**

Dr. John R. Bender, Winston-Salem

Dr. Powell G. Fox, Raleigh

Dr. John A. Payne, III, Sunbury

**Delegates to Tennessee Medical Society:**

Dr. V. H. Duckett, Canton

Dr. H. B. Ditmore, Marshall

Dr. N. F. Lancaster, Waynesville

**Delegates to Georgia Medical Society:**

Dr. Clyde H. Hemphill, Highlands

Dr. William F. Hollister, Pinehurst

Dr. W. M. Peck, McCain

**Delegates to South Carolina Medical Society:**

Dr. Tom Byrnes, Charlotte

Dr. L. B. McDonald, Hendersonville

Dr. Claude Milham, Hamlet

**Delegate to North Carolina Dental Society:**

Dr. W. R. Berryhill

**President McMillan:** Gentlemen, you have just heard the report of the Nominating Committee. What shall we do with the report.

**Dr. William H. Shaia (Charlotte):** I move that it be accepted.

[The motion was seconded by Dr. Crawford.]

**President McMillan:** All in favor of adopting let it be known by saying, "aye"; opposed, "no." The motion is carried.

[Vice President Elliott took the chair.]

**Vice President Elliott:** Gentlemen, the committee was appointed to review the president's recommendations and Dr. Sams, as chairman of that committee, will present his report at this time, Dr. Sams.

**Dr. William A. Sams:** Mr. Vice President this is the report of the Committee on the Message of the President, Dr. Roscoe D. McMillan.

Mr. President, Members of the House of Delegates, Guests, Ladies and Gentlemen: It has been a privilege for the Medical Society of the State of North Carolina to have for its president this past year a man who has been so closely connected with the Society for a long period of time. The vast amount of experience that President McMillan has had, coupled with his affability and his courageous ability to work and smile at the same time, has contributed to the invaluable service which he has rendered our Society.

Your committee, after careful deliberation on President McMillan's message to the House of Delegates, joins with you in praise for the marvelous progress he has reported for the past year. Knowing the affairs of the Society so intimately, Dr. McMillan has very forcibly brought to our atten-

tion some of the needs of our Society. The recommendations which he made have been carefully considered, and will be discussed in order.

1. His first recommendation is that president-elect of the Auxiliary be made a liaison officer between the Auxiliary and the Medical Society itself, and that she attend the fall meeting of the Executive Council in order that she may be well informed in our full program. Our Auxiliary is so important to us that we recommend the adoption of this suggestion.

2. Your committee fully concurs with Dr. McMillan's recommendation that appropriate memorial services for the deceased members of our profession be held at the annual session each year.

3. The third recommendation is that the outgoing president of the Society become an ex-officio member of the Executive Council. We feel that this suggestion should be adopted, since the outgoing president is well acquainted with the projects and problems coming before the Executive Council.

4. The fourth recommendation has reference to the coroner system. A bill on this subject which is fostered by Dr. Wiley Forbus, a pathologist of Duke University, has been introduced into the Legislature. This bill is fully explained in the annual report of the Committee on Revision of the Coroner System. Your committee feels that the passage of this bill would be a long step forward.

5. The fifth recommendation concerns better pay for the employees of mental institutions. Your committee concurs with the sentiment of our president by stating that the laborer is worthy of his hire, and urging that salary adjustments be made at once.

6. Recommendation No. 6 has reference to the industrial cases and the committee for studying the medical fees to be paid in such cases. We feel that this committee should be continued as recommended for another year. Some ground has been gained, and since the present committee is familiar with what has been done, it will be in a good position to press our cause with the Industrial Commission.

7. The seventh recommendation, dealing with the four-year medical school at the University of North Carolina, is timely. Your committee would further recommend that the present committee of twenty members of the State Society cooperating with the Dean of the Medical School be continued, in order that our great University may become an outstanding medical center in the entire South.

8. Recommendation No. 8 deals with legislation, which is a matter of vital importance to every member of the North Carolina State Medical Society. Section A recommends that each scientific section of the Society appoint one person each year to keep in contact with the Society's Legislative Committee, and to keep on file data and information that will be of use to the Legislative Committee when legislation concerning various branches of medicine is discussed before any committee of the General Assembly of North Carolina.

Section B, your committee feels, is a recommendation for a basic science law to be considered. A number of states which now have such laws are not thoroughly satisfied with them, and your committee does not feel that this recommendation should be adopted.

9. Your committee feels that the ninth recommendation, dealing with the race problem in the North Carolina medical profession, is timely. We recommend that our Society charter an organization to be known as the Old North State Medical Society, a branch of the Medical Society of the State of North Carolina, to be composed of Negro physicians who are qualified for membership in both societies. It should be stipulated that this charter would be subject each year to the approval of the

House of Delegates. Your committee feels that present conditions make it mandatory for our Society to act now upon this measure.

That is one that we should look squarely in the face. Whatever you think about it, and whatever your personal feelings may be, we may as well remember we are facing it and there is no way to face it except squarely and honestly, and as Dr. McMillan's report showed, we have a request from the Old North State Medical Society, composed of the colored doctors, and he is recommending that we set up something that complies with their request to give them their right in A.M.A.

I hope you understand what the intention of the committee was. We let them operate their own society and collect their own dues, and it makes it possible then for them to belong to the A.M.A. and they are not any part of our Society except as a branch, and they have no connection with and they have no voice in our Society, and they have to report back to us every year.

10. The tenth recommendation concerns the medical profession's relationships with hospitals and with various civic and public organizations. Section A recommends that dates for committee and district society meetings be cleared through the office of the executive secretary, in order to avoid conflicts. We feel that this suggestion should be adopted.

Section B asks that some clearance of the activities of all employed administrative personnel be made through our executive secretary. Your committee feels that this suggestion will facilitate matters pertaining to the Society's welfare. We also feel that the responsibility for all the personnel of the administrative force should rest with the Executive Council.

Section C deals with the work of the Committee on Hospitals and Professional Relations, and asks that this committee be continued. We heartily endorse this recommendation, and agree with the president's suggestion that hospitals be reimbursed for hospital expenses and doctors be reimbursed for medical service.

The recommendation given in Section D—that the ancillary force in doctors' offices be given a program of education by our public relations department—will do much to help the doctor in handling his patients and dealing with the public. We recommend its adoption.

Section E recommends that the scope of the present Public Relations Bulletin be broadened. Your committee feels that this recommendation should be adopted.

11. Recommendation 11 deals with the relationship between public health and private medicine. Section A, asking the establishment of a committee to study all infant deaths in our state, is approved by your committee. Section B suggests that a committee be set up to cooperate with school health authorities on the correction of defects among school children and other health services. This, too, is endorsed by your committee.

Section C recommends the inauguration of a committee to promote statistical reporting by private physicians to local health departments, to the end that accurate statistics may be compiled. Your committee feels that this is a matter on which the local health department should help the doctor, rather than the doctor helping the health department.

Section D recommends that the Public Relations Committee restudy the Society's high school essay contest and scholarship award, with the idea of diverting these funds to the training of health educators. Your committee does not concur with this suggestion, because we feel that the essay work being done in all of the high schools in North Carolina is one of our great assets for public relations.

We feel that this program should be continued and, if possible, expanded.

12. The twelfth recommendation deals with the plan for voluntary prepaid medical service insurance. In view of the fact that the House of Delegates, immediately following Dr. McMillan's address, and after a thorough discussion of the plan, adopted its own rule and followed the recommendation of the Insurance Committee of the State Society, your committee feels that this recommendation of the president has been fully met by the House of Delegates on its own initiative.

Your committee has given careful study to President McMillan's address, and with one or two minor exceptions it heartily concurs in all of his recommendations. We reiterate our statement that it is a privilege for this Society to have been served by a man as big, as broad-minded, and as generally loved as Roscoe D. McMillan.

Respectfully submitted,  
W. A. SAMS, Chairman  
H. L. JOHNSON  
WINGATE M. JOHNSON

That is the first address, Mr. Chairman. I would like to have some action on that, gentlemen, and then I will read the other one.

**Vice President Elliott:** Gentlemen, you have heard the recommendations of the committee. How do you wish to handle this? Do you want to take it up item by item or do you want to act on it as a whole. There are a great many recommendations there. What is your pleasure?

**Dr. C. H. Hemphill:** I move we act on it as a whole.

[The motion was regularly seconded.]

**Dr. J. B. Lounsbury:** Gentlemen, I would like to suggest the motion on the floor be amended to the extent of acting on it as a whole except for the racial clause which I think there would be a lot of discussion about.

**Vice President Elliott:** Do you wish to have that excluded from the motion? Dr. Hemphill, do you care to exclude it?

**Dr. Hemphill:** Yes, that is all right.

[The seconder agreed to the exclusion of that portion of the report.]

**Vice President Elliott:** You have heard the motion that we pass on this as a whole with the exception of the racial question. Is there any discussion? If not, those favoring the motion say, "aye"; those opposed, "no." The motion is carried.

I will ask Dr. Sams to read again the section on the racial question and we will act on that.

**Dr. Sams:** This is Section No. 9 in the recommendations. Maybe I can give it to you a little clearer by reading No. 9 from the president's address. This is what you want and I will explain or Dr. Wingate Johnson can help me explain.

[Reads from president's address.]

As our Constitution stands now, gentlemen, you know that the Medical Society of the State of North Carolina provides, the first clause in the Constitution says it is for white physicians only; so they would not be, under this recommendation, a component part of the State Society except as a section recognized by us, and they would have a right to belong to the A.M.A. if they can get to have some connection with the State Society.

**Dr. M. D. Hill:** They wanted full membership in the State Medical Society of North Carolina. They wanted their applications admitted as white applications were admitted and acted upon accordingly. That was their first request. But after three meetings with them, they agreed to this. These fellows were fortified with information that we didn't know existed and, after three meetings with them, they agreed to be patient with us if we could arrange some way whereby the Board of Trustees of the American Medical Association would let them come



in with their own dues, pay for A.M.A. through their own section, and we would once a year endorse them in our House of Delegates.

The Old North State Medical Society is a medical society that has been in continuous operation for 52 years. It is affiliated with the National Negro Medical Society which I understand has a society in every state, and they do not, if they are given this privilege, so they tell me, intend to abandon the Old North State Medical Society or the National Medical Society. They would still exist.

**Vice President Elliott:** Gentlemen, you have heard the recommendation. What is your wish?

**Dr. Forest M. Houser:** I move we accept it.

[The motion was regularly seconded.]

**Vice President Elliott:** It is open for discussion.

**Vice President Elliott:** We have a communication from the Old North State which I will ask Mr. Barnes to read.

**Mr. Barnes:** This is a letter dated April 25th, directed to Dr. Millard D. Hill, secretary-treasurer, North Carolina Medical Society:

"This is a proposal from the Old North State Medical Society (Negro).

"The Old North State Medical Society, in consideration of the advantages and benefits to be accrued to its membership and to potential qualified licensed Negro physicians of North Carolina as members of the American Medical Association, respectfully request the officials and the House of Delegates of the Medical Society of North Carolina to authorize its delegates to the American Medical Association to seek the admission of said Old North State Medical Society as a constituent association of the American Medical Association with all rights and privileges accruing to its members.

"CLYDE DONNELL,  
Secretary-treasurer"

**Vice President Elliott:** Is there any further discussion, Are you ready for the question? Those in favor say, "aye"; opposed, "no." It is unanimously carried.

We will proceed to the president's second address.

**Dr. Sams:** Mr. President, I haven't been able to find Harry Johnson to sign this report. I think he

is playing golf, but this is the report of the committee on the president's address at the banquet session of the State Medical Society:

Your committee desires to offer every commendation and praise to our lovable president for his fine message, the thesis of which was "Your Business and Mine." The subject matter was so well presented that the entire audience manifested their approval.

Your committee feels that this House of Delegates should offer its most sincere thanks and appreciation to Dr. McMillan and our constitutional and executive secretary for the marvelous program at the banquet, and the entire agenda of the State Society. Not at any time in the memory of your committee have we ever attended a meeting of the State Society in which any more constructive and educational program for all of the departments of medicine has been presented. Your committee feels that we are all indebted to the official staff of our Society in its entirety, to the girls who work out front, and to all committees.

We again commend you on an enviable record that our president, Roscoe D. McMillan, has made during his tenure as president.

Respectfully submitted,  
W. A. SAMS, M.D., Chairman  
WINGATE M. JOHNSON, M.D.

**Dr. Sams:** Mr. Chairman, I move the adoption of the report.

[The motion was regularly seconded.]

**Vice President Elliott:** Is there any discussion? All in favor of that motion please stand.

[The members of the House arose and the motion was carried by acclamation.]

[President McMillan resumed the chair.]

**President McMillan:** Is there any new business?

**Dr. Sams:** I move that we adjourn.

[The motion was seconded, put to a vote and carried.]

**President McMillan:** I now declare the second meeting of the annual session of the House of Delegates adjourned.

[The meeting adjourned at three-fifteen o'clock.]

## GENERAL SESSIONS

### FIRST GENERAL SESSION

Tuesday, May 8, 1951

The First General Session of the Ninety-Seventh Annual Session of the Medical Society of the State of North Carolina, convened at 9:30 A.M. in the ballroom of the Carolina Hotel at Pinehurst and was called to order by Dr. Millard D. Hill. The Invocation was spoken by the Reverend Thaddeus Cheatham, Rector of the Pinehurst Episcopal Church. Dr. Hill then presented Dr. Roscoe D. McMillan, president of the Society, who presided.

#### Presentation of the Moore County Medical Society Award

President McMillan recognized Dr. Rowland T. Bellows of Charlotte for a report of the Committee on Awards for the award of the Moore County Medal. Dr. Bellows presented the medal to Dr. Parker Beamer of the Department of Pathology of the Bowman Gray School of Medicine for his paper entitled, "Experimental Studies on Leptospirosis," which had been presented at the Ninety-Sixth Annual Session, May 1950.

The President recognized Dr. J. E. Prefontaine from the Section on Ophthalmology and Otolaryngology, who introduced Dr. Alfred N. Costner, Duke University Medical School of Durham, who presented a paper entitled, "Eye Signs in Intracranial Diseases."

[Vice President Joseph A. Elliott took the chair.]

Vice President Elliott recognized Dr. Wayne J. Benton, who introduced the Honorable Edwin Gill, United States Collector of Internal Revenue for North Carolina, who had prepared remarks for presentation under the title, "The Doctor and His Taxes," which subject was presented by Mr. Percy Allen of Mr. Gill's associate staff due to a limiting indisposition on the part of Mr. Gill.

**Mr. Percy Allen:** Mr. Chairman, Ladies and Gentlemen at the Convention: As Mr. Gill pointed out, the members of the medical profession do not present any unusual tax problem but in our discussion this morning, I think we should remember that every individual return filed by a professional man or a businessman usually has its own particular characteristics, and so far as items of income or deductions are concerned, there is no way that we can discuss them this morning to the point of putting our finger on your particular problem, necessarily. For that reason, we are going to have to discuss the subject this morning more or less in general terms.

There is one thing that I feel we are certainly justified in saying and that is that there is no black list, so-called black list, in the Collector's office. I know that is a fact. In conferences I have had recently, certain groups of professional men and businessmen seemed to feel that perhaps they have



been singled out, or their particular profession or their particular business has been singled out, as a shining example or for verification of their returns—but that isn't true.

The things that get most taxpayers in trouble, I think, are honest errors. With few exceptions, we find that people who do make errors are willing for the corrections to be made once they understand what the error is all about.

So far as the office as a whole is concerned, we find that the most common error of the professional man or businessman is failure to keep proper records. Frequently it occurs that a man or professional man goes into business, he is trying to keep his own records, and the first thing you know his business has grown to such an extent that he becomes lost and doesn't know where to go back and get a starting point. We have that, very often. But the main thing is to be sure to keep adequate records of your fees, of any kickbacks that you may get from the optical or drugstores, as well as other folks. We are discussing, this morning, mostly, trying to, the problems that affect the medical profession. We understand, of course, that a physician can be in other types of business. For example, he can be in the real estate business, he can be a farmer, he can be a druggist—or rather own an interest in a drugstore or something of that kind. But let me try to confine it just to the medical profession this morning and not to the other types of business.

In discussing the matter of records, we cannot tell you exactly what records you should keep. We do not describe any particular type or set of books. The Internal Revenue law says you shall keep such books as correctly and accurately reflect expenses. I think it largely depends on how large a practice you have, if you are keeping your records yourself, or whether you want to have an accountant keep them, just so long as they are complete.

Another important thing in connection with keeping records is that we occasionally examine books and find the books are not correct. Therefore, if you should keep your invoices or your sales slips or cash items paid out, they should be associated with your books, should it become necessary for an audit to be made. In other words, you want to substantiate your book entries, particularly in relation to your expenses, with receipts or invoices or something of that kind.

I will run down the list rather quickly but first, I would like to explain that generally we find that many members of the medical profession report their income on a cash-received and disbursement basis. Taxpayers, however, may report their income on accrual basis or cash-received and disbursement basis but they must report their income in accordance with the fixed method of accounting that they are observing. If you operate on the so-called cash basis that means that you report as income cash that you take in and you also report as expenses the items that are actually paid during the calendar year or during the taxable year, depending on whether you are on a calendar year or fiscal year; whereas, if you are on an accrual basis, you report this income, all your fees whether or not they have been collected. You would also report your expenses as they have accrued and not as they are paid.

Sometimes we run into an individual who is using both systems, on which we cannot go along. He is reporting his income on the cash-received and disbursement basis and his expenses on the accrual basis. He must be consistent.

One thing we have noticed in auditing taxpayers' returns when filed on a cash-received and disbursement basis is the item of bad debts. If you are operating on the cash-received and disbursement basis, you do not have bad debts because you have not recorded their income. Therefore, if some patient has paid you for an account which he owes you,

you don't have a bad debt because it has never gone into income. If you are a merchant operating a grocery store on a cash-receipt and disbursement basis, you wouldn't have a bad debt because the cost of goods you sold is deductible as cost of goods, whereas you did not report the amount as income because you hadn't collected it.

If you report on the accrual basis, then you have a different situation. You would report as income the fees that you received during the year, or rather that accrued during the year, whether you received them or not, and, therefore, if in a subsequent year you failed to collect any of these accounts, then you would have a bad debt deduction, but in reporting on the cash-received and disbursement basis, you did not have a bad debt deduction.

I hope that I will not create the idea this morning that you can switch from one accounting method to the other. If you are paying a return on the cash-received and disbursement basis, you must secure permission from the Commissioner before you can switch to the accrual basis, or if you are filing on the accrual basis you must procure permission before you can switch to the cash-received and disbursement basis. In other words, if you were reporting on the accrual basis, it would mean that your accounts receivable would go in as gross income and also your accounts payable would come out of the deduction.

So far as contributions, medical expenses (that is, personal medical expenses, not business expenses), and alimony are concerned, a taxpayer is never on the accrual basis. That is something important to remember if you are filing your return on the accrual basis, you cannot accrue contributions, alimony, or medical expenses.

In the way of deductions, of course, you would have your salary and wages for your nurses or receptionist, you would have your office rent if your office is not residence (and I will cover that in a minute), you would have your medical supplies. It will depend on to what extent the dealing in or handling of or selling of medical supplies controls your income, as to whether or not you should use an inventory method, that is, by taking an inventory at the end of the year and having an open-end inventory. Ordinarily, we have found that the average practicing physicians do not carry a sufficient amount of medical supplies on hand to require an opening and closing inventory because the difference would be negligible. In the case of clinics or maybe where a group of doctors are operating as a partnership, such would be the case, but inventories would have a material effect on the production of income.

You can also take off for your repairs for your office furniture, and, in that connection, let's assume that you lease an office and it is necessary for you to put in new walls or redo the office on the inside and there is a clause in your lease that you cannot take this equipment out. I know of one or two offices in Greensboro where there is such a clause. Then, you can depreciate the cost of that equipment over the period of your lease.

On insurance, we have to be a little careful, regardless of whether or not you are on the cash-received and disbursement basis; in the case of insurance you are paying for your equipment, or on your office building, if you pay for three years at one time you can only deduct one year. Actually, the law says it should be prorated according to the months. We usually go along fairly well on a proration of one year. For instance, if you pay three years of insurance in advance, you can only take off one year's tax.

You can also take off interest paid for business indebtedness. What I am talking about now is not your personal deductions on page three but your business expenses, for adjusted gross income.



You can take off your medical license fees, your 1½ per cent social security tax that you are paying on your nurse and your receptionist; and of course your electricity and water bills, stationery and office supplies, as well as freight shipments, telephone and telegraph expense, cost of your white uniforms if you buy them and have them altered yourself, and those of your nurse if you furnish her a uniform. Laundering of such items is deductible.

You may also take off your automobile expenses in connection with your business operations. We don't mean by that you can take off your commuting expense between your residence and your office, and if you are using your automobile for business and pleasure, you have another little problem that may require you to keep some actual or more detailed records. In other words, if you have an automobile that you are using for both business and personal use, the best thing you can do is: Try to keep a record of your actual amount of expenses, such as gasoline and oil, greasing in relation to your business use and disregard your personal use, which is a pretty hard thing to do when you buy a tank of gasoline and you don't know when you are going to get an official call and you don't know when you are going to church Sunday in the car. So, the best thing to do, in my opinion, is to keep a record of all your automobile expenses for the entire year, regardless of what they are: Tires, tubes, batteries, seat covers, gasoline, oil, wash, grease, and in addition to that keep a record of the miles that you travel for business use. If you know at the end of the year how many miles you have traveled for business use and the total number of miles that you have traveled for the year, you can take all of these expenses, add them up, and prorate them. Let's assume, for instance, that you traveled 10,000 miles for personal and 20,000 miles for business, a total of 30,000 miles; you would take two-thirds of these expenses, including depreciation, as business expense, and another one-third for personal use.

It is a hard problem. I realize that it is very detailed but we are trying to tell you things this morning that may save you a few headaches later on.

In addition to your automobile expenses, you can deduct your hotel, meals, and lodging, that is traveling, in connection with medical calls and attending medical conventions. You can deduct your meals and lodging when you are away from home overnight, but you cannot deduct your lunches when you are downtown. That is, when you leave home in the morning and go to the office and eat lunch downtown and are not away overnight, you do not have deduction for lunch.

Advertising expenses, of course, are deductible but physicians run into very little of that.

The cost of your small instruments that have an estimated life of one year or less, is deductible as a current item and you do not have to include that in your other items for depreciation. You do not have to capitalize those.

A very interesting item is entertainment. While salesmen incur entertainment expenses in connection with promotion of sales, it is rather unusual, I think, for us to consider that a doctor gets into that category. Rather, the ethics of the medical profession prevent you from going out and doing a little salesmanship so far as getting business is concerned. However, in connection with entertainment, the only thing that I can tell you is this: That it is allowable if it is proven to be an ordinary and necessary business expense, so that it puts the problem rather back in your lap, should the matter be questioned, to try to show that the particular nature of this expense was an ordinary and necessary business expense. I don't mean by that now that entertainment is not allowed to doctors, I don't

mean that at all; but I do mean, should the item be questioned, that would be the burden you would show.

Contributions are seldom if ever allowed an individual as a business expense. The regulations say this, and you will see what the problem may be. You may take off personal contributions if you are a partner or if you are an individual in an individual operation, on page three of your return, as a personal deduction, but not as a business deduction. Here is what the regulation says an individual must do before he can take it off as a business deduction: "It must be shown that the contributions and donations were made a reasonable expectation of financial return equal to the donation." I think that, rather than trying to argue about that so far as the business deduction is concerned, you would rather take it on page three of your return and go along in that way.

On the partnership return, it is still the same story. The contribution made by the partnership may be taken as an individual deduction but they cannot take it as a business expense.

I think we have covered bad debts pretty well. I told you men that a person on an accrual basis could make a deduction. When he is on a cash-received and disbursement basis, he does not deduct the deduction unless it has already been reported.

On the depreciation of your equipment, so far as buildings are concerned it depends on the various circumstances as to the age of the building, the type of the building and so forth, whether or not you constructed the building or whether it was pretty well up in age when you bought it. There are a number of factors that enter into it so that we cannot outline any set rules to follow in depreciation. Normally, however, on a good building, an estimated life of 50 years is allowed and on a wood building, 33⅓. Circumstances could increase or decrease those rates.

On your furniture and office fixtures generally the average figure used is ten years on those items; typewriters from five to ten; and on x-ray machines, I have found that it depends on the type of machine and that the average life, according to the companies who sell them, is from ten to twenty-five years. However, you realize that you may buy an x-ray machine that may become obsolete. For instance, you may buy a machine and set up an estimated life of ten years and start to depreciate it on a ten-year basis, and a change comes along and you want a more modern machine and, therefore, you have a machine that you either will sell or will turn in on a new machine. If you sell the machine, the old one, you take your original cost less the depreciation that you have claimed in prior years and up to the date of the sale, subtract that from your cost price and it will give you an adjusted basis. That is your unrecovered cost, the cost not recovered through depreciation. This item is deducted from your gross sales, depending on whether or not you had a profit or loss. If it is an isolated transaction and you had a profit and the machine was held for more than six months, only 50 per cent is taxable. If it is an isolated transaction and you had a loss it is deductible at 100 per cent.

Where you turn the machine in on another machine, for instance a machine that cost \$1,000 and \$500 depreciation has been deducted in prior years, leaving an adjustment basis on the date of the exchange for the new machine of \$500, the selling price of the new machine, we will say is \$2,000; regardless of what is allowed you on your old machine, you may have a realized gain or loss but it is not recognized for tax purposes because it is an exchange of like assets. Your adjusted basis of the new machine is your only problem and that is the



unrecovered cost of your old machine plus the cash you paid for the new. Then, you might have a machine, if you had an adjusted basis of \$500 and the dealer would allow you only \$300, you would have a realized loss that is not recognized. By the same token, he may allow you \$800. You have a realized gain of \$300 and it is not recognized. Your basis of the new machine is the unrecovered cost of the old machine plus the cash which you paid for the new one.

That rule does not apply if other than cash was paid. In other words, if you throw in a piano or an automobile or something like that, it changes the picture.

While we discussed the automobile a while ago, and depreciation, if you are keeping a separate record of your automobile expenses and the automobile is used for business and personal use, you should set up your depreciation on an annual rate and then reduce it by the percentage that was used for personal use and carry the remainder into your schedule as a business expense. If the automobile is used 100 per cent for business use, of course, you don't have that problem.

Now let me talk to you a little bit about another subject. A lot of this is going on up around Greensboro and maybe all over the country; that is, a lot of doctors have their offices in their personal homes. If you have a home that you are using, say an eight-room home and you are using two rooms in connection with your work as a physician, or your profession as a physician, you can set up a depreciation on the entire house. The only thing is, you will run into this problem: If you have not been using it as an office all along from the date it was acquired, then you are going to have to get a basis for the house at the time you did convert it into a partial business asset. However, that is something that will have to be worked out in the case of each individual and under separate circumstances, but you could set up your house on an annual depreciation and then take one-fourth of this amount as the part applicable to business use.

The same thing could apply if you didn't have separate meters so far as electricity, water, and heat are concerned. You take your total heat, water and the like, for the year and then you make your proration.

If the maid helps your wife clean the house and also helps in the office, you can keep a record of the office work she does and get a deduction there, too.

There is one thing I would like to mention, and we are not singling this group out for this, and that is farming activities. We have found that a lot of taxpayers and individuals over the country, in all walks of life, but more especially those who are principally engaged in other business or other professions, have felt they were farmers. Some of them, we found, thought they were farmers to the extent of taking on from \$8,000 to \$13,000 of expenses and not reporting any income. The trouble was that these expenses were mostly development expenses of the farm. I had a very unusual situation some time ago. This man was trying to defend himself as best he could and he was doing a pretty good job up to this point. He had a farm from which he sold \$140 worth of ducks, but he spent a little over \$7,000 building a swimming pool for the ducks. [Laughter] It was purely coincidental that he built his house around the pool and an investigating officer took a photograph and sent it in with his report and I began to question the individual about this pool and how the ducks used it, and all those things, and finally I said, "What about your springboard? Do the ducks use the springboard?" [Laughter]

He asked me to figure up the tax.

It doesn't mean that you cannot be a farmer and

a physician at the same time. I am not trying to imply that at all, but the thing you want to watch is to be sure that such expenses as development expenses, that is, building irrigation ditches, cost of clearing trees and land, cost of planting trees, drilling and equipping wells, laying irrigation pipe lines, correcting creek beds, building roads, and other items of that kind, are development expenses, particularly where you are trying to build the farm up to a certain extent or to a certain point for raising cattle or something of that kind.

This man that I was talking about finally admitted that he was building up a farm so that he could retire about ten years from now and have a nice place to go.

Here are some of the expenses that cannot be deducted: Occasional expenses leading to graduation as an M.D., textbooks purchased in connection with the above, travel, hotel and lodging incurred while undergoing examination, registration and other cash expenses in connection with appearing before the medical examining board, cost of post-graduate work, including travel and lodging, commuting expenses between home and office, travel, meals and lodging incurred in securing a location for practice. That means your first practice.

There is one other thing that bothers physicians quite often and that is social security and withholding tax. I think with the program that has been going on recently probably all of you are familiar with that, but just in case you aren't, social security and withholding tax are due on the nurse as an employee and on your receptionist. Frequently, we find this situation, where two doctors are maintaining an office on each side of a reception room; they aren't in a partnership operation but they have one receptionist or nurse or whatever designation they want to place on this one individual in the center office. Two elections can be made there. Each one of you can file separately. Each one of you can report the same employee and report the withholding and social security taxes if any are due, or you can form a limited partnership so far as the operation of the center office is concerned. I don't know whether this is advisable or not. It probably could run into complications in case of injury to an employee. That is something you might want to bear in mind, but it is something that can be done. The Bureau will permit that.

If you each report the individual for withholding tax purposes and each allow her the exemption that you are entitled to as a separate employer, then she will nearly always owe additional tax at the end of the year because her combined income will exceed the amount of exemptions that were allowed as the single exemption when they filed the return, and then the chances are she will talk to you about it and question you about why you didn't take enough out in the first place.

Dependents are one thing we have a little trouble about; that is, an individual can only be claimed as a dependent by a person who has furnished chief support; that is, 51 per cent of the support. That means money spent, too, and if the relationship exists. In other words, so far as relationship is concerned, cousins are out and anything beyond that.

In connection with this matter, I will tell you a little anecdote and then I will stop. It said this little boy went to his mother and said, "Mother, when is Aunt Emma coming?"

"Aunt Emma? We don't have an Aunt Emma."

"Oh, yes, we do; Daddy was making out his income tax return and he said, 'Here you come again Aunt Emma. God bless you!'"

The mother said, "No, no, that was just a phrase Daddy was using."

He said, "Mamma, he blessed her last year too, when he filed his return."

Thank you very much. [Applause]



**Vice President Elliott:**

Vice President Elliott recognized Dr. Charles F. Williams, Chairman of the Section on Pediatrics, who introduced Dr. Harry H. Gordon, Professor of Pediatrics, University of Colorado Medical School, Denver, who presented a paper entitled, "Some Problems of Premature Infants."

Vice President Elliott recognized Dr. Robert J. Ruark, Chairman of the Section on Obstetrics and Gynecology, who introduced Dr. John P. U. McLeod for the presentation of a paper entitled, "A Simplified Modification of Staining the Vaginal Smear for Immediate Appraisal of Endocrine Activity."

Vice President Elliott recognized Dr. C. F. Strosnider for the introduction of Secretary-General Manager, George F. Lull of the American Medical Association, who addressed the General Session.

**Dr. Charles F. Strosnider:** Mr. President, Members of the Medical Society of North Carolina, and Ladies and Gentlemen: We are indeed fortunate today to have with us a man of distinguished service, a man of broad experience, a man who has traveled much, a man who has been disciplined much, because we know if you have been in the service for 34 years you have been through discipline, and through that discipline and through that constant service and through that loyalty to the service of our United States Army, through the period of 34 years, he has labored faithfully and retired as a Major General in the United States Army.

In January 1946, our Board of Trustees were indeed fortunate in obtaining the services of this man, our friend, as Secretary-General Manager of the American Medical Association, and it is through these past six years that we have been having trying times and times that would test the faith and would try the most learned, through these trying times this friend has been loyal, he has been a good listener, he has traveled much in our service. Among other qualifications, he is a good pinch-hitter and he is pinch-hitting today. I have great pleasure in presenting to you your friend and my friend, George F. Lull. [Applause]

**Dr. George F. Lull:** Mr. Chairman, Ladies and Gentlemen: Dr. Henderson asked me to extend to you his regret at being unable to be with you, and it was real regret that he couldn't be here. It is a difficult job, pinch-hitting for the president of the A.M.A., especially this weekend when I have had two things to do: To come to Pinehurst and to see the derby. I have gotten by with the first one and I hope I can get by with the second. I pinch-hit for Dr. Henderson at the derby where he had a seat right on the finish line.

I am going to talk to you this morning in substance as Dr. Henderson would have talked to you had he been here, that is, to say something about medicine's first year of grace. I should like very much to be able to stand here today and say to you that our national campaign is over, that American medicine has won its fight against Compulsory Health Insurance and socialization, that we can relax once again in our respective ivory towers of professional and scientific activity. It would be a pleasure, I am sure, for me to say those things and for you to hear them, but if I spoke in that vein I would be indulging in hasty reporting. I would be guilty of slipshod diagnosis and I would be failing in one of my major responsibilities.

I can report to you—and this is an honest pleasure—that American medicine has made great and demonstrable progress in the fight against Compulsory Health Insurance, in positive actions to help solve medical care problems by voluntary methods, and in the drive to gain the approval and support of the American people in both phases of our campaign effort.

However, it also is one of my duties to warn you that the threat of socialization has not yet been eradicated, that numerous problems remain to be met and solved in a manner satisfactory to the American public, that much work is yet to be done, that medicine still has to win and hold the support of several important segments of American public opinion.

In this connection, the magazine, *Medical Economics*, with which most of you probably are familiar, made some pointed and timely remarks in its December 1950 issue. *Medical Economics*, in an editorial entitled "The Decline of Ewingism," said: (and I quote) "1950 may go down in history as the last year in which full-scale national compulsory health insurance was a live issue."

Before I continue, let me emphasize that the key word in that paragraph is the word, "may."

For the editorial, after pointing out that the November elections brought defeat to nearly 90 per cent of the congressional candidates who favored Compulsory Health Insurance, then went on to say:

"Thus medicine is given two years of grace—two years to accentuate the positive, to extend and improve the voluntary plans, to clinch its case through action as well as through words.

"Once before (in 1946), when faced with a similar opportunity, we frittered it away. This time let's do the job right. It's the only sure death sentence for Ewingism."

I agree, emphatically. This time let's do the job right. 1951, in my opinion, should be regarded as only the first half of a two-year grace period—and two years is not a very long time. Neither this year nor next can we relax and rest on our laurels. We must continue all positive, constructive actions which will help to demonstrate, once and for all, that America's medical care problems are being solved by voluntary methods.

If we in medicine fail to make this concerted effort, the sequence of events in 1950 and 1952 might prove to be a repetition of 1946 and 1948. And if that happens, the drumbeaters for socialized medicine will be out on parade once again, with greater fanfare than ever before. And along with them in the revival march will be all the other salesmen for the assorted wares of state socialism.

When I speak of those election years, however, I want to stress one very important point. I am not urging either victory or defeat for either the Republican or the Democratic party, but socializers who masquerade as either Republicans or Democrats are the same breed of fish.

What I am urging—inside, outside and all around both major political parties—is complete defeat for the philosophy of socialization, as applied to medicine or any other field of American endeavor.

For more than two years, medicine's National Education Campaign has been conducted on that nonpartisan basis—and it will continue to be so conducted. The demonstrable progress which I mentioned earlier has been achieved only because we took our case directly to all Americans everywhere—only because we presented it as an issue transcending all politics and party lines. As a result, medicine's public support has come from all segments of America's political, economic and social life.

Medicine's broad, over-all progress in the fight against compulsion is clearly evident in four major events or developments:

First, since the beginning of our campaign more than 10,000 national, state and local organizations, representing a massive cross-section of all America, have taken a public stand against Compulsory Health Insurance, or any other form of socialized medicine.

Second, last October, during the American Medical Association's nationwide advertising campaign



on the issue of freedom versus compulsion, more than 65,000 companies, organizations and individuals spent over two million dollars to advertise their support of medicine's position, and their faith in American voluntary methods.

Third, last November, in the polling places of America, the people administered specific, pointed rebukes to most of the advocates of Compulsory Health Insurance, and they also threw a large amount of cold water on the general trend toward state socialism.

And fourth, the nation's voluntary health insurance plans have been growing and improving at an accelerated pace during the past two years, and all reports indicate that they still are gaining momentum.

All four of those developments represent a tremendous amount of effort, progress and success. But they also point the way to a number of undeveloped areas and undone tasks. In the realm of public opinion, there still is a need for affirmative, educational effort—especially among specific groups. And in the practical solution of medical care problems, there still is a vast amount of work to be done—not only in the field of voluntary health insurance, but also in other fields involving the supply of medical service.

Despite the widespread public support which already has been mustered, medicine has not yet enlisted the potential help which is available from the labor unions and working people of America. We know that scores of labor leaders and millions of rank-and-file workers agree with our stand against socialized medicine in particular, and socialism in general. One of our major tasks this year is to bring that latent support out in the open, expand it, and crystallize it into official actions and resolutions by labor organizations.

As you probably know, dramatic progress in that direction was revealed last December at the A.M.A. Clinical Session in Cleveland. At that time, Mr. William L. Hutcheson, General President of the United Brotherhood of Carpenters and Joiners of America, announced that his union's Twenty-Sixth General Convention had voted down a resolution to support the Truman National Health Program.

Mr. Hutcheson, who also is a vice president of the American Federation of Labor, denounced socialized medicine and the entire socialistic philosophy of compulsion. He analyzed both of them as a serious threat to the rights and freedoms of labor and all other groups in America. And he said that he was happy to take a stand beside us in our fight for our convictions.

This courageous action by Mr. Hutcheson and the carpenters' union, which has 700,000 members, now calls for a vigorous follow-up. It should be regarded as the opening gun—the precedent, the example—for a barrage of similar actions by labor leaders and unions all over the country. We must take the Hutcheson message to every state, district, and local labor leader and labor organization in America. No other single activity will do more to hasten the final tolling of the bell for Ewingism.

According to the Wage Earner Forum, a continuous study of labor thinking conducted by the Macfadden Publications, nearly one-half of the nation's wage earners already are opposed to socialized medicine, and more than one-fourth still are undecided. By simple arithmetic, therefore, it is obvious that vigorous effort could win us the support of three-fourths of American workers. And while we are at it, we might as well try to convert the remaining one-fourth, who now favor socialized medicine.

If we are to gain complete, permanent victory over Ewingism, we not only must win strong support from American labor—which has been the main target of Government propaganda—but we also must get that support translated into official,

outspoken, public action by labor unions, action that will penetrate the skulls of any politicians, planners or national labor leaders who still refuse to recognize public opinion.

Meanwhile, there are some other areas in which soil remains untended. On the distaff side, despite the fact that over 5,000 women's organizations have taken a stand against socialized medicine, we have not yet won enough support from such important groups as the Parent-Teacher Association, the League of Women Voters, the American Association of University Women and the nurses' associations. There is a need for much more grass roots action by local units of those groups.

Medicine has received staunch help from the American Dental Association, the American Bar Association and many of their state units. But here again we should try to bring about closer relationships among physicians, dentists, lawyers and all other professional people who face the common threat of regimentation.

In order to expand and strengthen our position with labor, women's groups, other professions, and all of the American people, it will not be enough to present the case against socialized medicine. We must demonstrate by actions, as well as words, that we recognize the existence of certain problems—and that we are doing something about them.

In this sphere of positive, practical action, our major objective is to promote the maximum growth and development of all sound voluntary health insurance plans. Low-cost, comprehensive protection must be made available to every individual—regardless of where he lives, where he works, or what the color of his hair may be. Until that is done, many people will continue to flirt with the simple alternative of a Government system which promises everything for nothing.

Another problem—and it is one which has been aggravated and given added prominence by the present national emergency—is the matter of financial aid for medical education. This is another area in which we must prove that American voluntary methods can do the job.

The Board of Trustees of the A.M.A., at the Cleveland session, took the lead by appropriating half a million dollars as the nucleus of a fund to be raised for the aid of medical schools throughout the nation. Pointing to the dangers of Federal interference, the Board of Trustees said:

"There is a growing public awareness that Federal subsidy has come to be a burden, not a bounty, for it is bringing intolerable increases in taxation, and is dangerously increasing Federal controls over our institutions and the lives of our people."

The Board expressed the hope that its action will stimulate other professions, industries, businesses, labor groups and private donors to help swell the fund for medical education—and it urged all American doctors to contribute individually and to take the lead in obtaining contributions from other sources.

In still other areas, involving patient-physician relationships, we must push the extension and full development of state and county programs for providing 24-hour emergency medical service, settling complaints of patients, placing doctors in communities which need them, eliminating excessive fees, and improving medicine's public relations in every way possible.

We must do all of these things—faster and better than ever—if we are to make the most of our two-year grace period, and bring about the final death sentence for Ewingism.

For instance, I might briefly refer to some of the departments of the American Medical Association which are busily engaged in year-about activity of improving medicine in America. The Council on Medical Education in Hospitals, for instance, which is now engaged in making a complete survey of all



the medical schools in addition to carrying on its ordinary work of grading hospitals as to their teaching programs and as to whether or not they can maintain them; the Council on Pharmacy and Chemistry, which was one of the first started by the American Medical Association, and which is still actively engaged in protecting the patient and the physician from being exploited by drugs that are of no value and may be harmful; the Committee on Cosmetics which was established a short time ago because there have been a lot of accidents from the use of cosmetics that were harmful; the Committee on Research. The Board of Trustees, as you know, set aside 1½ million dollars, the income of which was to go to small grants in research. We realize that this sum cannot be awarded in any large amounts but we feel that there are many places in the country where important research is being carried on by individuals where a small amount of money would help them.

I would mention, too, the Council on Food and Nutrition which protects the patient against the abuse of dietary foods; the Council on Medical Service; the publications that we publish for the doctors; the health education of the public. We are not only carrying on a series of radio activities, we may branch out soon, and we have put on some television; but the television is quite expensive and it takes a lot of work, a lot of rehearsal of places where it can be put on properly and we may farm out this program in the near future.

Lastly, we have two scientific sessions each year for the education of the physician. These are attended very well and I might say that a month and a half ago, we had registered at Atlantic City, as individuals (that is, doctors and their wives and exhibitors) 10,600 people. Every room in a boardwalk hotel had been sold out two months ago and the meeting is not until the middle of June. The program is an excellent one. The exhibits, the scientific and technical exhibits, are excellent and this is what American Medicine is bringing to its membership.

I appreciate having the opportunity of pinch-hitting here for Dr. Henderson. I have been your guest before and have thoroughly enjoyed it, and I hope that I will be your guest in the years to come again. Thank you very much. [Applause]

[President McMillan resumed the chair.]

President McMillan recognized Dr. R. Eugene Fox who introduced Dr. W. Walton Kitchin for the presentation of a paper entitled, "Progress of Medical Civil Defense in North Carolina."

**Dr. Walton W. Kitchin:** It is a mixed pleasure to follow so able and so distinguished a speaker as General Lull. It is a pleasure to add that General Lull was held in the same high esteem by the medical officers during the recent war as he is by the members of the American Medical Association at the present time.

My remarks this morning are somewhat in the same tenor as his. There is urgency about our problem. I hope that 1951 will prove an entire year of grace for the emergency medical service.

Until June of 1950, at which time the possibility of war was suddenly more distinct to all of us, the status of medical civil defense in North Carolina was, as in most all of the other states of the Union, hardly in its infancy. Shortly thereafter, from a national level, it was decreed that what had been a snail's pace was to be accelerated to the pace of a greyhound. What specific bit of information so stirred Washington to decree this transition was not then, and is not now, known to me. However, to those of us who have been working on this problem during the past ten and a half months, it has become increasingly apparent that the pace of a greyhound must be maintained until such time as we can perfect our organization, to save the maxi-

mum number of lives and hold to a minimum the deformity which could result from an atomic bomb blast in our native land.

Our medical resources cannot lie in wait of an atomic blast. Our normal medical day-to-day life must go on. We cannot stockpile adequate amounts of all materials which would be critical in case we are faced with an atomic catastrophe. We cannot draw a one-fourth of million pints of blood and store them with smug satisfaction of knowing that this blood would be available on a moment's notice. We cannot buy surgical instruments and fully equip thirty mobile hospital units and have this valuable equipment lie in storage in case it is needed for such a disaster. We cannot lay aside a sufficient number of dressings for burns and have only to pick them up instantly when needed. Those things we cannot do. Our concept of what we can do is to establish a functioning organization with all personnel of this organization aware of the nature of the task which may lie ahead and with the realization that each must drop his personal life at a moment's notice to direct his peculiar talent in the direction which it is most needed. We feel that we can arrange to utilize those stocks of supplies, instruments, and equipment which now exist, and which may be transferred temporarily to the use of medical civil defense in a very short time. We think that by organization we can, with a minimum of delay, draw the needed amount of blood and have it on the spot where needed within hours after an atomic blast occurs. We think we can tie in our organization with other existing civil defense agencies to permit operation of the over-all civil defense plan to run smoothly. In brief, our entire program has been predicated on the belief that medical resources, presently available and properly organized, with such organization directing a maximum of planning effort, can save more lives and prevent more deformity in a relatively short time, and thus render to mankind the biggest medical bonanza in history. To this end we have organized and we have planned.

To begin with, an atomic catastrophe occurring in a heavily populated area will present a medical problem too big to be handled by any one state. It is consequently necessary for interstate mutual aid to be effected and the entire civil defense medical program, both on a national and state level, has been directed toward this end. Specifically, we in North Carolina know that should any of our sister states be hit, that we must render all of our available medical resources, both as regards equipment and personnel. Conversely the sister states are prepared to come to our assistance should a similar misfortune befall us. Our entire medical resources will be called out if a catastrophe should strike as near on the north as Washington, or as near on the south as Savannah, Georgia, and perhaps even further in either direction. In order to organize our medical personnel, we began by assigning each county medical society unit a quota of blood-drawing teams. These units were to delegate medical and allied personnel in such quantity that, during a period of approximately two and a half weeks one person out of every twenty in the unit area could donate one pint of blood. The county units were further instructed to have enough blood donor-recipient sets on hand and personnel ready to start drawing blood in large quantities immediately upon receipt of the news of an atomic disaster.

The fixed hospital installations in the state have all been appraised of the necessity of evacuating to their homes, all patients who could possibly, with any degree of safety, leave the hospital. This obviously would make ready a large number of hospital beds for reception of casualties from the site of the disaster. These same hospitals have been asked to overstock supplies which would most likely



be needed to treat this type of casualty. In addition to this, hospital bed space has been arranged for at the old Camp Butner site and another 600 beds at the Central North Carolina Tuberculosis Sanatorium where full surgical facilities exist. The physicians of the Raleigh-Durham area have prepared to staff the Camp Butner site as a reception center for casualties in case of disaster.

To render aid at the site of disaster we have seen fit to establish twenty-eight mobile hospital units. Of these there are two types. We have organized nine type A hospital units comprised of twenty physicians, sixty nurses, and eighty lay personnel; and eighteen type B units consisting of ten physicians, thirty nurses, and forty lay personnel. These units, it is understood, will probably all be dispatched to the site of disaster immediately upon receipt of the news of a catastrophe and to insure their prompt readiness each was pre-designated a rallying point at which personnel will automatically collect once news of such a disaster is received.

As was mentioned earlier, we feel that it is necessary to use the existing equipment as well as the existing manpower. We do not feel that the production capacity of the American Surgical Instrument Manufacturers is such that a comparable number of hospitals in every state of the Union could be adequately equipped with new instruments even if given two or three years of preparation. Consequently, we have asked the parent fixed hospitals in the state to be prepared to lend to the mobile units enough basic surgical equipment and supplies to operate. To staff these hospitals with nurses, the State Nursing Association has cooperated to the fullest extent.

Generally, I believe their plan of making nursing personnel available for such hospital units and still keeping nurses available to staff the fixed installations rest on four main points.

First, the abolition of private duty nurses and reversion of all such nurses to a staff status either in the fixed or mobile hospital units.

Secondly, the temporary abolition of the eight-hour day in favor of the twelve-hour day. I say temporary, because we only contemplate that the period of immediate crisis would last for about three or four weeks, at which time the nurses with the mobile hospital units could return to their parent organizations.

Thirdly, to obtain volunteers from among those nurses who are not actively engaged in nursing at this time, among whom would be many doctors' wives, to temporarily do staff duty in their home town fixed hospital units.

Fourth, the training and ultimate designation of more responsibility to nursing aids. I am told that recruitment of lay personnel has proved somewhat of a problem. However, nowhere is the problem reported to be insurmountable and all of the mobile units feel that with a little more time for the significance of our undertaking to become apparent to the lay public that recruitment of lay personnel for the menial chores in the hospital will not prove difficult. To supplement the mobile hospital units, the smaller communities who were not called upon to furnish such units, have been called upon to furnish surgical dressing teams and intravenous therapy teams.

To further utilize the various surgical talents within our state we have seen fit to organize a surgical auxiliary group which encompasses talents of those surgeons who may be practicing in communities where there is more than one surgeon but yet not enough to furnish a mobile hospital unit. Feeling that since medical care, as we know it today, will temporarily be cut to a minimum, that one surgeon left in such a community could handle the

surgical needs of that community, and the other surgeons in that community have been made available to the surgical auxiliary group.

This particular group will rally at three geographically placed centers in the state to be dispatched to supplement the work of the mobile units or other hospital organizations wherever they are needed. It is contemplated that the casualties handled by these mobile units at the site of the disaster will be evacuated as soon as possible to fixed installations which have previously been prepared to receive them and when the medical work at the site of the disaster is terminated by reason of the successful evacuation of those needing further treatment. The mobile units will then return to their fixed installations to carry on the medical management of the casualties which have been received at such installations.

To augment the supply of equipment and drugs the wholehearted cooperation of the North Carolina Pharmaceutical Association and the association of surgical supply houses in the state has been obtained. Each of these organizations is to see that its members furnish to our mobile, and later to our fixed units, any equipment or drugs available upon request.

The biggest problem has been, and continues to be, the procurement of an adequate number of blood donor-recipient sets. To help us with this problem, the Red Cross has guaranteed the use of such sets in a number which we consider adequate.

The transportation of medical personnel, equipment, blood, and casualties rests as the entire responsibility of the State Civil Defense organization and is not a medical function. There are obviously other medical problems which have not been noted but these have been met by the State Board of Health and are not within the scope of this paper.

A year ago a great deal of mysticism surrounded atomic injuries. This mysticism has been dispelled almost entirely from the minds of the medical profession in our state and I believe, by their contact with the lay public, much of this mysticism has been dispelled in lay public minds also. We visualize that the injuries resulting from an atomic blast will present few new problems to us. It will, however, present the same old problems multiplied many, many times.

The organization and planning as given above could become operational at this time. The medical profession is aware of the problems which may confront it and it is confident of meeting this challenge so that should atomic catastrophe occur, history shall record that indeed, never before have so many owed so much to so few. [Applause]

President McMillan introduced Dr. Robert H. Flinn, Emergency Medical Consultant, National Security Resources Board, Washington, who addressed the General Session on the subject, "The Physician's Role in Civil Defense."

**Dr. Robert H. Flinn:** Mr. Chairman, Ladies and Gentlemen: It has been a real pleasure to hear the excellent progress on emergency medical service that Dr. Kitchin just gave us. I wish we had more such progress reports around the country.

Since this program was printed, I might say that a small group of us have been transferred from the National Security Resources Board over to the newly created Federal Civil Defense Administration. Colonel W. L. Wilson, who many of you know, heads up the Health and Welfare Office and in that office is our Health and Special Weapons Defense Division, headed by Dr. Norvin C. Kiefer, and I have the professional services planning, within that division.

The health services of Civil Defense, which includes not only the normal medical and health functions, but special weapons defense, have been among



the most talked-about areas in the entire Civil Defense field.

Well over a year ago the problems of creating adequate civil defense health services were presented in a variety of speeches and articles, both to the public and in the press which serves the medical professions. Since then a great many problems have been resolved and the solutions published in the recent Civil Defense manual **Health Services and Special Weapons Defense**.

I am sure that most of you have seen this volume. And, also, I am reasonably sure that not enough of you have studied it thoroughly. I can say this without fear of contradiction because our incoming mail continues to request answers which were given in the volume.

So far as we can determine, the basic facts of civil defense have not yet made a deep impression. These facts are:

1. The United States can be attacked in force, at any time.
2. It can be attacked with atomic, biological, chemical or conventional weapons.
3. In case of atomic attack the result would be many thousands of living casualties requiring immediate treatment. This would be true no matter how well prepared and indoctrinated the public might be.

You have heard that last statement before. Probably you are a little tired of hearing it. Nevertheless, we receive indications every day that a great deal of planning now in progress does not take into account this fact. Many health service organizations for civil defense are being created. Only a few are being adequately designed for mass treatment of casualties. "Mass treatment of casualties" is too easy a phrase. It rolls off the tongue without drawing an adequate picture.

It would be a more graphic picture if we said that an organization must be prepared to give emergency treatment to 80,000 surviving casualties if an average metropolitan area were attacked without warning, with the Hiroshima type bomb.

Of these 80,000 survivors, about 48,000 persons would be suffering from burns, 40,000 would be suffering from mechanical injuries, and 16,000 would be suffering chiefly from radiation sickness. Many of these casualties, of course, would be suffering from multiple types of injury. About two-thirds of the injured would require hospitalization, and about one-third would require litter transportation. About 240,000 units of blood, plasma, or plasma substitutes would be required for the treatment of these casualties from one atomic bomb. Multiple attacks would greatly compound the casualty problems.

Obviously, in face of such a need, the emphasis must be on a well-knit, mobile organization which has been conditioned to the realization that only minimal care can be planned for in the first few hours of a disaster. The entire organization must be geared to meet the first great need; that of sustaining life until proper treatment can be given.

In creating such an organization it is unfortunately too easy to get lost in mazes of detail and to lose sight of the main objective in developing the health services machine.

A few Civil Defense Health Services Directors, who have studied the manual carefully, have written us to the effect that tackling the job of organization is comparable to attacking Mt. McKinley with a garden trowel. They ask: "Where should we start?"

Our reply is: "With the creation of the first aid and hospital system." This is an essential requirement; yet we find that some cities already have the nucleus of a competent radiological defense organization but only a rather nebulous plan for the creation of a first aid system.

In response to the question "Why?" we receive the answer that it is impossible to organize a first aid system until trained first-aiders are available. This is much like saying that a house cannot be built until the shingles have been delivered. The creation of the first aid organization, including the location of mobilization and pick-up centers, arrangements for vehicles, and tentative assignment of physicians and related professional personnel is enough to keep several people busy for quite a long while.

Similarly, in the hospital service field, merely the inventory of existing facilities, using the forms in the appendix of the **Health Services Manual**, will give hospital administrators and Civil Defense Health Services personnel a great deal to do.

The provision of health supplies is also one of our most serious problems. There would not be at present an adequate amount of consumable surgical supplies within any reasonable distance of our large cities in the event of an atomic attack. Inventories must be made of readily available supplies in local stores and hospitals. Critical target areas must provide for dispersed, local first-aid supplies that could meet the first wave of casualties. The state and local civil defense organizations will need to integrate their supply program with the Federal regional reserve stores of health supplies being planned by the Federal Civil Defense Administration. Professional groups such as physicians can be of great assistance in planning and operating an adequate medical supply system.

Some of our communities, especially the largest cities, have done splendid work and are quite far advanced in their health services and special weapons defense plans; but as a whole the civil defense health services picture across the nation is very spotty. A great deal must be done within a short time if we are to be prepared in the event of enemy attack. This is not a time for leisurely activities. Federal Civil Defense Administrator Millard Caldwell recently called on the governors of the various states to intensify their civil defense activities. He did not imply that attack was imminent or anything of the sort, but it is obvious to everyone that there is considerable tension in the world today. Certainly, the medical profession knows that increasing tension among nations, as among individuals, must lead sooner or later to some sort of reaction—usually unfavorable.

These next few months and years are going to impose heavy responsibilities on our health departments and on our physicians, many of whom already have been called up for duty in the armed forces. More will be called. Those who are not, will find their burdens greatly increased, quite apart from civil defense. To add the need for civil defense training to the burden seems like adding the final straw to the load that broke the camel's back; but there is no alternative. I believe most physicians have accepted this fact. The great demand from physicians at this moment is for instruction. They want to know "What do we do and how do we begin?"

It is apparent that the individual physician cannot fit himself into the civil defense machine until the machine is ready for him. He can prepare to take his place in that machine, however, by studying the problem and by taking the necessary training.

He should work through his medical society. In turn, his medical society should maintain the closest possible liaison with Civil Defense authorities. This cannot be stressed too much. We know of cases where groups have organized their own civil defense programs without reference to proper civil defense authorities. The result is wasted motion. Physicians today have no energies to waste.

If the local Civil Defense Director so suggests, the physician may, as an interim measure, prepare



for possible disaster by getting together his own informal first-aid team. He may call on other professional people within his normal practice area to aid him. He may consult with one or two other physicians, two or three dentists, several pharmacists, and as many nurses as feasible. This group may agree informally that, in case of disaster, they will meet at a prearranged place and function as a casualty team. For the time being, since this will be an emergency measure, each would contribute his own instruments and supplies. The pharmacists would be prepared to move their stocks into an emergency first-aid station.

Once the Civil Defense health services are organized, however, as they are being here, each physician would be assigned a place. Similarly, the other members of his informal team would have definite assignments.

Specialists should not attempt to form their own first-aid teams, however. Their particular skills will be needed in hospitals.

There is no reason why the formation of surgical, trauma, shock, burn, and other teams cannot begin at once within each hospital.

All this, of course, makes a demand on the time of the individual physician who may reply that he has no time. Time must be found. Finding it in most cases will involve sacrifices. Physicians will not, of course, be alone in making this sacrifice. Civil defense workers in every field must give up many hours for study and practical work. Every first-aid-er—and that includes all civil defense workers—must spend many hours in constant practice.

Fortunately, in most cases the physician has no new skills to acquire. He needs only to learn how to apply his present knowledge to civil defense problems.

We very often are asked, "When should the various specialized services start to organize?" The answer is, "Right now." This applied to your particular groups as well as to all others.

There is the question of first things first. Casualty care services must have a high priority. However, the casualty services cannot stand alone. It would be of little use to save lives one day only to lose them the next because of an epidemic brought on by a complete breakdown of sanitation. Similarly, a radiological defense service program would be of little use in the event of a chemical attack. In our manual, **Health Services and Special Weapons Defense**, it was urged that programs be initiated and developed simultaneously under the direction of the Health Services Director. Perhaps this statement should have been made more emphatic, that these services should be started simultaneously, and right now.

We are faced with a situation where world conditions have produced what is in effect a "time bomb." The diplomatic forces of peace are working as best they are able to deactivate the "time bomb;" yet, preparation must go on simultaneously for immediate action in case the deactivation fails. Furthermore, we do not know what the clock inside this bomb says. It may be set for a long time from now. It may be set for a month from now, and it may be set for the next minute.

The Civil Defense Health Services, which are part of the group preparing for action in case this international "time bomb" does go off, have no choice but to start action at once. The time for leisurely planning and implementation is past. Most of the answers necessary for immediate action are contained in the Health Services manual. Other answers will be forthcoming as fast as they are available. Meanwhile, the basic work must be done. The Red Cross has begun its program to train first aiders. By the time this training is complete, the

local civil defense health organizations must be prepared to absorb them and to integrate them into the Civil Defense Health Services teams. Since the work of organization is a lengthy, difficult task, a strong effort must be made to be ready to use the services of the volunteers.

Our advice to you is this: From now on act as though tomorrow were already here. [Applause]

President McMillan recognized Dr. L. R. Doffermyre who introduced Joe Baxter Roberson, of Buncombe County, North Carolina, as the winner of the 1951 high school essay contest. The essay, entitled, "Why the Private Practice of Medicine Furnishes this Country with the Best and Finest Medical Care." The essayist was presented with a Six-Hundred Dollar scholarship.

President McMillan presented Mr. S. K. Proctor of the Alcoholic Division of the North Carolina Board of Hospital Control as the host of Dr. Robert Fleming, Department of Psychiatry of Harvard University and Associate in Psychiatry at the Peter Bent Brigham Hospital of Boston, who addressed the session.

[The meeting adjourned at one-ten o'clock.]

## BANQUET SESSION

Tuesday, May 8, 1951

The annual banquet of the Society was held in the dining room of the Carolina Hotel presided over by Dr. Paul F. Whitaker as Toastmaster for the occasion.

Invocation was rendered by the Reverend Marshall Scott Woodson, President of Flora McDonald College of Red Springs. Following the invocation the distinguished guests of the Society were introduced by Dr. Whitaker.

The president's jewel was presented to Dr. Roscoe Drake McMillan by Dr. James F. Robertson.

Toastmaster Whitaker then introduced Dr. Roscoe D. McMillan for the presentation of his presidential address, "Your Business and Mine." (Published in the *North Carolina Medical Journal*.)

Toastmaster Whitaker next introduced the guest speaker of the evening, Dr. Howard A. Rusk, Professor and Chairman, Department of Physical Medicine and Rehabilitation, New York University-Bellevue Medical Center and Chairman, Health Resources Advisory Committee of the National Security Resources Board, and Chairman, National Advisory Committee to the Federal Selective Service, who spoke on the subject, "Medicine, Mobilization and Manpower." (Address to appear in later issue of the *North Carolina Medical Journal*.)

Following the address of Dr. Rusk, the Banquet Session was adjourned with the announcements of the Henry Scott concert and the President's Ball of the evening in the ballroom.

## SECOND GENERAL SESSION

Wednesday Morning, May 9, 1951

The Second General Session was called to order by Dr. Henderson Irwin, second vice president of the Society.

Vice President Irwin recognized Dr. E. E. Menefee, Chairman of the Section on the Practice of Medicine, who introduced Dr. George T. Harrell, Jr., of the Bowman Gray School of Medicine, for the presentation of a paper entitled, "Myxedema."

Vice President Irwin recognized Dr. Mabel E. Goudge, Vice-Chairman, Section on Neurology and Psychiatry, who introduced Dr. Carl A. Whitaker, Professor of Psychiatry at Emory University, Atlanta, for the presentation of a paper entitled, "The Doctor's Contribution to the Mental Hygiene of Civilians at War."



[President McMillan resumed the chair.]

President McMillan recognized Dr. John R. Bender of Winston-Salem.

**Dr. John R. Bender:** Dr. McMillan and Friends and Guests, Members of the Society: A few days ago I heard Dr. Thorek say that he had been introduced to more medical audiences in the country as a speaker than any other living American. I hope he doesn't mind a repetition of that introduction this morning.

It gives me distinct pleasure and it is certainly a great honor to welcome Dr. Thorek again to North Carolina and introduce him to you at this time. He will speak on the subject of "Jaundice." [Applause]

[Dr. Philip Thorek presented his paper on "Jaundice."]

President McMillan recognized Dr. Samuel B. McPheeters of Goldsboro.

**Dr. Samuel B. McPheeters:** Mr. President and Members of the North Carolina Medical Society: I have been requested to inform you that there is forming, as the result of requests from many persons and groups, a memorial organization to perpetuate the memory of Dr. George M. Cooper. As yet, no name has been given the organization, no invitations have been issued for this organization. Other organizations have taken similar action. It was felt entirely necessary and appropriate that, in the formative period, this Society should be acquainted with what is in process and it is my purpose to inform you of that at this time.

President McMillan recognized Dr. Walter W. Vaughan, Chairman of the Section on Radiology, who introduced Dr. Robert P. Barden, Associate Professor of Radiology of the Graduate School of Medicine of the University of Pennsylvania, for the presentation of a discussion, "Observations on Certain Pre-Malignant Lesions of the Gastrointestinal Tract."

President McMillan recognized Dr. Thomas N. Lide, Chairman of the Section on Pathology, who introduced Dr. Robert P. Morehead, Professor of Pathology, Bowman Gray School of Medicine, for the presentation of a discussion on, "Neoplasms of Bone and Bones."

President McMillan recognized Mr. LeRoy Cox, the Society Director of Public Relations, who introduced Mr. Edgar J. Forio, Vice President of the Coca-Cola Company, Atlanta, Georgia, for an address on "Public Relations."

**Mr. Edgar J. Forio:** Dr. McMillan, Dr. Irwin, Dr. Hill, Friends: Even a lawyer sometimes finds himself in a rather peculiar position. I want to say to you, and say it quickly, that it is both an honor and a privilege to be here; and while speakers are supposed to say this, I genuinely mean that I feel very keenly the honor that has been bestowed on me in asking me to appear here today.

I can tell you how I feel by telling you just a little story. Two drunks were going home one night along about midnight. It was a beautiful, cold, moonlight night, and they had to cross a bridge and this bridge was over a rather placid stream. One drunk went over to the edge of the bridge and looked over and he saw the moon down there in the placid waters, reflected, of course, and he said to the other drunk, "Say, come over here." The other drunk came over and looked over the edge of the bridge, and he said, "Do you see what I see down there?"

The other fellow said, "What do you see down there?"

"I see the moon down there."

He said, "Is that the moon down there?"

The other drunk said, "Yes, that is the moon down there."

He said, "Then what the devil am I doing up here?" [Laughter]

After Dr. Thorek and the lecture on bones and the lecture on radiology, I wonder sometimes what I am doing up here.

I would like to congratulate you on the marvelous association you have and tell you a little story about association before we launch finally into the subject of public relations. I am always reminded of Happy Chandler's story that he told in the Senate. Societies, organizations or associations have for their purpose not only the dissemination of knowledge, such as we are witnessing here this morning, but they are the protective cloak. All of our businesses, all of our professions operate in an atmosphere, they operate in a climate and I would like to say that our commercial businesses operate in a climate and the climate in which we operate commercially, some of it we can do something about. The international affairs of the world help shape the economy on which a business must operate and in which professions must operate, and we have very little to do, perhaps, with the shaping of the international atmosphere and climate which surrounds our economy.

We have the national aspects of the situation and we exert more or less influence in that direction; and then we also ultimately have the state and the local levels at which associations are able to function, and Happy Chandler so aptly put it by telling the story of a mountaineer boy who came down into a town to buy a rifle. He walked into the store. He was one of the members of a feudin' family up in the hills and he went into the store and he said to the keeper of the store, "How much is that thar rifle?" And the keeper said, "That rifle is \$27.50."

He said, "Let me see it."

The storekeeper took it down, handed it to the boy. He felt of it and he balanced it and he did all the things that a person normally would do who had a keen sense of appreciation of a fine tool. Then he laid it on the counter, wiped off the places on the stock and on the barrel where he had touched it, and turned around and started out of the store. He had hardly gotten to the door when he turned around and came back and said, "How much did you say that rifle cost?" And the storekeeper said, "\$27.50." He started away again and then he came back again and he said, "I will take it." The storekeeper started to prepare it for packaging so that he could take it home and he thought he would like a little conversation and so he said to the young man, "You kind of made up your mind in a hurry, didn't you? You started out and you started back and you started out again. How come you made up your mind so quickly?"

He said, "I got to the door and as I started out the second time I thought to myself, I'd better have that rifle because if and when I need it, and I ain't got it, I'll never need it again." [Laughter]

I think the same thing is true of organization and planning. If and when you need them, and you ain't got them, it is too late.

Down home in Georgia, we have an old saying, "People are down on what they ain't up on." I think in the whole contemplation of a public relations program, the philosophy or the thought or the belief or the conviction that people are down on what they ain't up on is a pretty good basis, a private picture and the slant we would like to take on this.

Let me talk to you a moment about public relations. There have been all kinds of mysticism, all kinds of mystery thrown around public relations. Public relations isn't a thing in the world except good relations with the public, just being a good and clean and decent and forthright citizen who has something in the form of a service that is worth while and that is necessary in the community.

The result of a good public relations program is good will and good will is that indispensable quality,



that indefinable substance that everybody, whether in commercial or professional life must have. If you will permit me for a moment, not to talk to you folks as doctors but to talk to you as professional men, let me temporarily make you some of my people and let me talk to you as if I were talking to my own organization and I can perhaps say some things that I might not say to you as doctors.

I was talking recently to one of the greatest men, I think, in public relations work and in the law. He was a man who said that good will which is the result of a good public relations program is that thing which makes tomorrow's business more than an accident. That was his definition of good will, that which makes tomorrow's business more than an accident, and the fruits of public relations and good public relations, which is good will, has been ultimately defined by the Supreme Court as the tendency on the part of people to return to a place where they have been well served.

At Raleigh I followed three men on the program who had made amazingly fine talks and they left very little for me to talk about the subject of public relations, so I undertook to talk about the philosophy of public relations and, if I may, I will talk with you today about that subject, the philosophy, rather than the implementation, the means which you use to put arms and legs and feet on the program to make it walk around in the streets and in the homes and in the business places in the community.

This great man said to me: "The simple phase of public relations can be laid out in two fundamental rules: (1) Know human nature; and (2) Be human yourself."

If I were talking with you as doctors, certainly charged with the responsibility of having a bedside manner, and after seeing the slides and the charts certainly knowing more about what makes people tick and what makes people move and what activates people, I would be presuming to talk about these things; but from a strictly commercial point of view and talking to my own people, I say, know human nature and be human yourself. That is all it takes, except the implementation of those two things.

What do I mean when I say know human nature? I will tell a story on that subject. There was once a great piano company. They were not successful in selling their pianos so they called in their advertising department and they got up a fine series of ads which had for their purpose to show that the pianos were made in the finest wood, from the finest forests, that they were painted with the most beautiful paint, that the keys were made from the tusks of the finest elephants in all Africa; but they sold no pianos, as a result of those advertisements.

Then they called in the accounting department and they decided that the reason they were not selling pianos was because they didn't have a sound financing plan, and they charged the accounting department with the problem of working out a sound financing plan and they did: So much down and so much a month and still they sold no pianos.

But the head of that business was a man who knew that, in order to sell pianos, a certain group of people had to be reached. In order to get mass sales, many people had to buy pianos who normally would not buy pianos, and this man knew human nature. So he called in his staff and he said to them, "I want you to prepare a series of advertisements on this subject"; and they did, and they sold pianos, and the subject was: "Make Mary a Lady."

Those advertisements run in the daily newspapers and in the magazines and in the various other forms of communications read by the workman in the street car, going back and forth to his work with his lunch box on his knee, offered the tangible evi-

dence of the culture and the refinement and the things that he wanted to bring to his children, the opportunities he never had and, therefore, this man who knew human nature, knew how to reach in and to dip into the human heart and through the instrumentality, which he had for sale, to furnish something that would answer a human desire.

Be human yourself. That is a pretty difficult thing sometimes, and how do we be human? First of all, we are human if we are sincere. By that, I mean that, in commercial life—and I am talking to commercial people for the moment—if you have something that is worth while, say so. If you are giving lip service in the form of the service that you give your community, you can't get by with it. It has got to be genuine. But if you have it, do not hide your light under a bushel.

Second, how are you human in your business? I had a friend once who came from a small town, and it wasn't Harry Truman, and he operated a little haberdashery store in this little town and he had a most unique success, and he grew to a big store and then all of a sudden his progress stopped and one day several of us were chatting with him about it and he said, "I don't know what is wrong, fellows. Here I have built this beautiful new store, it is highly departmentalized, we have all the things we need, and yet I am not making progress."

A little trip around the store made it pretty obvious why he was not making progress. The human, the man, had been stymied by the machine and by the mechanization and the departmentalization of that business to the degree that the personality that built it, the human character that built it, had been submerged and we came up with this fact: The trouble with your business is that it is not being operated on the basis that it still has to make good in this community, that it still has to justify itself in the eyes of its customers, that it still has to earn its right to do business in this community. You have arrived. You are smug, you are complacent, you are departmentalized beyond the ability of the store to reflect the humanness of yourself and, therefore, you are reflecting to this community an attitude, "Well, you can buy here if you want to. If you don't, it is all right, too."

In business, every business has to earn and constantly earn and be humble and ambitious to justify its very existence and its right to the respect and confidence of the people of the community, or else that business will not survive.

The third thing is that, if you have objectionable characteristics in your business, remove them. To commercial people, I don't mean sales resistance, I don't mean those fundamental and tried philosophies which have to be sold over the years and which have to be made part of the thinking processes of the people with whom you do business; but I mean if you have fundamental objectionable characteristics in a business, remove those or else the business will not go forward.

I was talking the other day of the man who said to me about a good product that he was acquiring from a certain company, "I would never buy this product from that man but I can't buy it from anybody else within the radius of 100 miles." What had that man who sold that product done to that good product through his attitude, and what had he destroyed in good will and public acceptance by either a smugness or a lack of humility in his opportunity to continue to sell his people on his right to live and his right to have their confidence and to justify the position which they give him?

I was in a small town not long ago and I stayed at the house of a friend and, after dinner, he took me in his car and said, "Come out here, I want to show you our mill." I said, "I didn't know you owned any part of that mill."

He said, "I don't."



I said, "What do you mean 'our mill'?"

He said, "That is our mill. That mill belongs to this town"; and then he began to tell me what that mill meant to that community and I could see the integration of the public relations policy in that community by that mill which meant that any citizen, even though he had no financial interest in that mill, would have risen to the defense of that mill. "People are down on what they ain't up on"!

I want to say this about a public relations policy. I think George Ade said it. The thing he observed was that the people who bring home the bacon are people who specialize in bringing home the bacon; they are not people who go out and accidentally stumble over it; and Brother Paschal said, "The heart knows reasons of which the mind knows nothing." When we step out and we incorporate a business and become members of a community, we become members of that community who either go forward or backward and we assume our responsibility in that community, whether it be Community Chest, Red Cross, hospital drives, Boy Scouts or the thousand-and-one other community efforts that require the support and the conscientious help of good citizens.

What about commercial life generally? How do they judge a product in commercial life? It is judged by this standard: Is the product right? In our business, every single solitary soul is in the public relations department. Everybody. We are in a goodwill business. We must have goodwill or we don't exist. Everybody feels that the product itself is the prime thing. You have to have a product that is good. Second, you have to have a good employer-employee relationship. You have to have good, clean, sound advertising; and, above all, strange as it may seem, you have to operate an efficient business. People are expected to operate efficient and clean-cut businesses. That is how people judge a business.

The fundamental philosophy of all public relations runs through the product, the price of the product, the kinds of ingredients and the thousand and one other things that make up the day-to-day operating things that a business needs to have to get along.

The fruits of good public relations policy are generally very pleasant. I will tell you a story about Clancy. One day in New York, on a steep hill, with snow and sleet on the ground, a big truck came down the hill. There was a Cadillac parked at the stop light and the light was red and the truck couldn't stop and the truck just came on down and crashed into the back end of this big Cadillac, and the cop came over and he yanked open the cab door and said, "What's your name?" And the truck driver said, "My name is Clancy."

"Oh, Clancy, eh? Where did you come from?"

"I came from County Cork in the old country."

"Oh, you did?"

He said, "Yes."

"Well, it's a fine place. I'll tell you what you do, Clancy. You sit right where you are and I'll go down and ask the man in the Cadillac what the hell he meant by backing up into your truck." [Laughter]

Those were the fruits of a good public relations policy. We live in this climate, we live in this atmosphere, and what do we do about them? The medical profession in a particular town is, to that town, the entire medical profession. It matters little what goes on in some other place so far as the physical representation in the particular community might happen to be. It is the medical profession in that town and the kind of service rendered to the people in that community by which the entire profession nationally is judged.

In conclusion, I want to say this to you about public relations. I want to differentiate it from advertising. What you say about yourselves is advertising. What people say about you—and I am still talking to my commercial people—is reputation and, in commercial life (and I shall confine it to that), next to character, reputation is the most priceless asset that you can possibly have. That is the thing that is built by a sound public relations program and reputation and character cannot be had as the result of a good public relations program unless that program has as its basis the knowledge of human nature and the genuine desire and ability to be human.

I would like to tell you one other little story. Lots of people think a public relations program is just something you sit down and develop and go out and initiate. A good public relations program is pretty much like a man catching a street car. If the street car is going to the east, if you want to catch it you don't run to the west, neither, when you see it coming, do you take a running start and run smack into it and get yourself knocked down. On the contrary, what you actually do is run alongside that street car until the momentum of the street car and your momentum are such that you can put your hand on the handle and merely step aboard and get in and sit down and read your newspaper.

By that I mean, the organization, the business who will not bend before the wind will be blown into eternity. That is why you are seeing in business today more definitely than ever before, executives of a public relations nature, men who can take Government regulations, Government restrictions, Government interference and all the other things that go with Government, men who can sit at the table and bargain with labor, men who can sit down with capital and know all about the fiscal problems, and men who know management and know how to operate good management. Those are men who can bend before the wind. Those are the men who can live with their times. Those are the men who can see and who can adjust and can, through friction, rub off the rough edges and guide industries, guide professions, businesses, and anything else that depends, generally speaking, upon the goodwill and the understanding and the conception of the public.

The story goes that once upon a time there was a farmer who went to the county fair and hired himself a man. Labor was very scarce and as he went from one place to the other and one booth to the other, he found that he had a very difficult problem. Finally he found one boy whom he could get and the only qualification that this boy had was that he could sleep on a windy night. He thought that was a pretty poor qualification that this boy could sleep on a windy night, but that was all the boy would tell him, "I can sleep on a windy night."

But the business of getting somebody to assist him was so difficult that he decided that he would hire this boy, even if that was his only qualification. He took him home from the county fair and put him to work, gave him a room upstairs in the garret. He became very annoyed with the boy after two or three days; every time he wanted him to do something, he would find the boy was fixing a lock on the barn door or putting in a window pane or doing some little piddling thing, he thought, when he ought to be doing some major thing. And yet, the boy wasn't too bad, he was getting his chores done, but still he just felt he ought to be doing other things from time to time.

So as time went along, one night at three o'clock in the morning he was awakened and he heard the wind, and the wind was coming down from the hills, down through the valley, and he jumped up and he

said to his wife, "Gracious, there is the big wind," and she said, "Yes, I know what that means."

He hastened to pull on his trousers and he rushed out in the hall and he called up to the garret and he said, "John, John, come down here!"

In his mind, he could see the barn doors going off, the windows blowing in, the chicken houses knocked all over the place, the cattle roaming around and all of the other chaos that came when the wind came down from the hills. He ran out in the hall and called again, "John, come down!" And he heard no noise upstairs. Finally, in exasperation, making up his mind to fire John the first thing in the morning, he dashed out and, fighting the wind, he made his way to the barn and, to his utter amazement, the barn doors were locked, the windows were all there, the chicken houses were just where they should have been, as though the wind were not blowing at all, and he came back in the house thinking about this boy, John, who hadn't even taken the trouble to get up; and then it occurred to him what John had meant when he said that he could sleep on a windy night.

It meant, day-by-day, he lived the philosophy of doing that which should be done. He lived the philosophy of being prepared against the eventuality, and when he said he could sleep on a windy night, he meant he had done everything within his power to so control the situation that his business or his barn could withstand the pressure of the big wind. Thank you. [Applause]

President McMillan recognized Dr. William B. McCutcheon, Chairman of the Section on Surgery, who introduced Dr. H. Haynes Baird of Charlotte, for the presentation of a paper for himself and Dr. Hamilton W. McKay entitled, "Ureterosigmoidostomy."

**President McMillan:** We now are at the point of elections. First is the election of a member to the Medical Care Commission.

**Dr. M. D. Hill:** I move that we recommend to the Governor the appointment of Dr. William M. Coppridge to succeed himself as a member of the Medical Care Commission.

[The motion was seconded by Dr. R. B. Davis, was put to a vote and carried.]

**President McMillan:** The terms of two members of the editorial board of the *North Carolina Medical Journal* expire this year.

**Dr. G. Westbrook Murphy:** I take pleasure in moving that Dr. William Nicholson and Dr. John B. Graham be elected to succeed themselves.

[The motion was seconded by Dr. M. D. Hill.]

**President McMillan:** Are there any other nominations? If not, we will proceed to vote. All in favor of this motion by Dr. Murphy let it be known by saying, "aye"; opposed, "no." The motion is carried.

President McMillan recognized Dr. Claudius McGowan who presented a series of prizes awarded to winning contestants in the Annual Medical Golf Tournament.

President McMillan then presented Dr. Lenox D. Baker, Chairman of the Committee on Exhibits, who awarded a series of prizes to physicians attending the exhibit presentation.

[The meeting adjourned at 1:30 o'clock.]

### CONJOINT SESSION

The Conjoint Session of the North Carolina State Board of Health and the Medical Society of the State of North Carolina convened at 12:00 at the Carolina Hotel, Pinehurst, North Carolina, Wednesday, May 9, 1951, Dr. G. Grady Dixon, President of the State Board of Health, presiding.

[Dr. J. W. R. Norton, Secretary of the State Board of Health and State Health Officer, read his prepared report.]

On motion, duly seconded and carried, the Secretary's report was accepted. Thereupon Chairman Dixon relinquished the gavel to President McMillan and the Conjoint Session adjourned at 12:25 o'clock.

### THIRD GENERAL SESSION

Wednesday Afternoon, May 9, 1951

The Third General Session convened at five o'clock, Dr. Roscoe D. McMillan, president of the Society, presiding.

**President McMillan:** The first item on the agenda is the report from the House of Delegates on the report of the Nominating Committee. The report is as follows:

For President-Elect, J. Street Brewer, Roseboro  
For First Vice President, Forest Houser, Cherryville

For Second Vice President, A. L. Daughtridge, Rocky Mount

For Speaker of the House, Roscoe D. McMillan, Red Springs

For Vice Speaker of the House, Paul F. Whitaker, Kinston

For Members of the North Carolina State Board of Health (4 year terms each): G. Grady Dixon, Ayden; G. Curtis Crump, Asheville.

Delegates to the Medical Society of Virginia: John R. Bender, Winston-Salem; Powell G. Fox, Raleigh; John A. Payne, III, Sunbury.

Delegates to the Tennessee State Medical Association: V. H. Duckett, Canton; H. B. Ditmore, Marshall; N. F. Lancaster, Waynesville.

Delegates to the Medical Association of Georgia: Clyde H. Hemphill, Highlands; William F. Hollister, Pinehurst; W. M. Peck, McCain.

Delegates to the Medical Association of South Carolina: Tom Byrnes, Charlotte; L. B. McDonald, Hendersonville; Claude Milham, Hamlet.

Delegate to the North Carolina Dental Society: W. Reece Berryhill, Chapel Hill.

Place of meeting for 1952, Carolina Hotel, Pinehurst, dates to be selected by the Executive Committee.

Respectfully submitted,

JULIAN A. MOORE, Chairman.

[Upon motion made by Dr. Lawrence H. Owsley, seconded and carried, the nominations were closed and the report of the Nominating Committee was accepted.]

**President McMillan:** Is there any unfinished business to come before the Society? Any new business? If not, the hour has arrived for the installation. I am going to ask Dr. Harry Johnson and Dr. Harold Smith to escort the President-Elect to the rostrum, Dr. Fred C. Hubbard, of North Wilkesboro.

Friends, as I said a moment ago, the hour has come when I relinquish the duties of president of the Medical Society of the State of North Carolina. I do so with rather mixed emotions. First, I have to say to you that, in a measure, I am really glad. It has been a responsibility that has been placed upon our shoulders throughout the past year. We have tried our best to master them in the best possible way and in a measure I cannot help but feel sad that the task is completed. I know of no one to whom I would rather pass the gavel in a moment or two than my good friend Fred Hubbard, for I know that the Society is in good hands.

Fred, I am instituting this time, for the first time in the history of the Medical Society, a presidential oath of office. I am going to ask you to hold up your right hand and repeat after me—

[President-Elect Fred Hubbard repeated the following presidential oath of office:]

I solemnly swear that I shall carry out the duties of the office of President of the Medical Society of the State of North Carolina to the best of my abil-



ity. I shall strive constantly to maintain the ethics of the medical profession and to promote the public health and welfare. I shall dedicate myself and my office to improving the health standards of the American people and to the task of bringing increasingly improved medical care within the reach of every citizen. I shall uphold the Constitution of the United States and the Constitution and By-Laws of the Medical Society of the State of North Carolina at all times. I shall champion the cause of freedom in medical practice—and freedom for all my fellow Americans.

I do solemnly swear that I will discharge the duties of this office to the best of my ability, so help me God.

**President McMillan:** It is with genuine pleasure that I present the gavel to my friend, Dr. Fred C. Hubbard of North Wilkesboro.

[The audience arose and applauded.]

[The new president, Dr. Fred C. Hubbard, took the chair.]

**President Hubbard:** My friends, this is the proudest honor that has ever come or ever will come my way. Mere words can scarcely express to you the deep feeling of appreciation and gratitude and love that is in my heart for the great honor you have conferred upon me. When I think of the trust and the confidence implied in your action, I'm overcome and I wonder if I deserve it. When I realize that in other years you have conferred this great honor upon many eminent men and leaders of North Carolina, in the field of medicine in our age, then I know that I have a great heritage and tradition to defend and to live up to.

I am cognizant of the fact that with the office comes great responsibilities. I therefore ask your indulgence, to a certain extent at least, your help at all times, and your prayers. In this way, I am sure we shall be able to bring to fruition many of the worthy and important projects in which we are all interested. I thank you. [Applause]

It is my honor now to ask that the President-Elect be conducted to the platform. Dr. Hill will

escort Dr. Street Brewer to the platform. [Applause]

Dr. Brewer, I am sure that I express the feelings of all of your friends, and all of these men are your friends in this Society, when I say I am immensely pleased with the fact that you are in line for the presidency of this great organization.

**Dr. J. Street Brewer:** Friends and members of the Medical Society and ladies, I wish to say that I appreciate very deeply and am very grateful for the honor that my colleagues have seen fit to bestow upon me. For some years I have served in various capacities in this Society, not with the hope of reward but because I believe in organized medicine and that in organized medicine is the salvation of our profession. I can assure you when the time comes for me to assume heavy responsibilities, I shall do my utmost to discharge them worthily. I thank you. [Applause]

**President Hubbard:** It is again my pleasure to ask that the first vice president be conducted to the rostrum. For that function I am going to ask Dr. Joe Elliott to serve.

Dr. Houser, I want to congratulate you upon your election as first vice president of the Medical Society of the State of North Carolina. [Applause]

**Dr. Forest Houser:** Thank you, President Hubbard, and all the members of the State Medical Society. I just want to say that I will do the best I can to warrant the trust you have bestowed upon me.

**President Hubbard:** Is Dr. A. L. Daughtridge in the audience? [Not present] Dr. Daughtridge has been elected to the position of second vice president and, since he isn't here, I suppose we will have to initiate him later.

Is there any old business to come up at this time? Any new business? If not, then I am going to declare that the Ninety-seventh Session of the Medical Society is adjourned sine die.

[The Ninety-seventh Annual Session of the Medical Society of the State of North Carolina adjourned at five-twenty o'clock.]

Sine die.

## BULLETIN BOARD

(CONTINUED FROM PAGE 317)

### DEPARTMENT OF DEFENSE

#### Army Cites Greater Requirements For Women Medical Specialists

The Army recently renewed its call for more women medical specialists, and reduced the minimum tour of active duty from the twenty-one months previously required to twelve months, with opportunities for appointment in the Regular Army.

Although the Army indicated last January a need for 247 dietitians, 179 physical therapists, and 146 occupational therapists, only twenty-two dietitians, six physical therapists, and nineteen occupational therapists were obtained and ordered to active military service by May of this year.

In order to simplify the procurement of these much needed specialists, the Women's Medical Specialist Corps has made available in Army Area Headquarters, Procurement Officers to conduct personal interviews and acquaint qualified women specialists with opportunities available to them in the Army.

Additional information may be obtained by interested applicants from any Army Area Headquarters, or by writing to the Surgeon General, Department of the Army, Washington 25, D. C., attention: Chief, Women's Medical Specialist Corps.

### FEDERAL SECURITY AGENCY

There are 2,267 public venereal disease clinics in the United States and Territories of Alaska, Hawaii and Puerto Rico, Dr. Leonard A. Scheele, Surgeon General, Public Health Service, announced recently. His statement was based on information contained in the new **Directory of Venereal Disease Clinics**, published by the Division of Venereal Disease, Public Health Service.

North Carolina leads all other states, with 222 venereal disease clinics. Mississippi has 176 clinics; Georgia, 155; Pennsylvania, 139; Florida, 131; California, 118; Kentucky, 106; Texas, 101; South Carolina, 97; and Louisiana, 93. All other states have fewer than 90 clinics. These facilities were reported by the States and Territories to the Public Health Service as of November, 1950.

The directory also shows that forty-two states have prenatal laws requiring blood tests, and forty-one states have premarital laws requiring blood tests and physical examinations for venereal disease.

The 157 page directory carries summaries of prenatal and premarital laws, names and addresses of each diagnostic and treatment facility, laboratory facilities of each state, lists of Marine hospitals and facilities for American seamen.

\* \* \*

#### Cancer Teaching Grants

To improve instruction in cancer diagnosis and treatment by future physicians, dentists, and osteopaths, Public Health Service grants of \$885,067 have been made by the Cancer Institute of the National Institutes of Health.

Among the thirty-seven medical schools and sixteen dental schools receiving grants are Duke University and the University of North Carolina, the amounts being \$24,899 and \$5,000, respectively.

Cancer teaching grants, which are renewable annually, enable professional schools to employ faculty members to coordinate and strengthen their cancer instruction programs in the classrooms and clinics, as well as to procure required cancer train-

ing materials. Medical schools are limited to \$25,000 annually for four year schools and \$5,000 for two year schools; dental schools to \$5,000 annually.

\* \* \*

#### Training Program in Treatment of Epilepsy

Doctors and members of related professions will get training in the latest methods of treating epilepsy under a program to start soon at the University of Illinois.

Katharine F. Lenroot, Chief of the Children's Bureau, who announced completion of plans for Federal-State-University cooperation in the project, termed it "a great step forward in the fight the nation is making to help its 200,000 epileptic children."

The University of Illinois training will be available for physicians, public health nurses, medical social workers, technicians in electroencephalography (use of an electronic machine to measure brain waves accurately), and other health workers.

The training program will be conducted in the Consultation Clinic for Epilepsy, which has been a part of the Department of Psychiatry, College of Medicine at the University of Illinois, since 1946.

Patients will be those referred to this clinic from the State of Illinois, and from outside that state when they represent special problems in the diagnosis and treatment of the disease.

#### A.M.A. Accepts Armour Acthar

Acthar, the Armour Laboratories brand of ACTH, pituitary adrenocorticotrophic hormone, has been accepted by the Council on Pharmacy and Chemistry of the American Medical Association.

Receipt of the formal notice of acceptance was announced by Thomas E. Hicks, vice-president of Armour and Company in charge of The Armour Laboratories, 520 N. Michigan Ave., Chicago.

The A.M.A. action applies specifically to Lyophilized Acthar (The Armour Laboratories) in 10, 15, 25 and 40 mg. vials. The Armour brand is the first ACTH product so accepted.

In making the announcement, Mr. Hicks pointed out that, despite various rumors, there is no shortage of Acthar and that all orders are being filled immediately.

#### Glycerine Substitutes Opposed

The essentiality of glycerine in wartime as well as peace-time is stressed again in a recent decision of the drug industry. At a combined meeting of the American Drug Manufacturers Association and the American Pharmaceutical Manufacturers Association, representatives of the two groups said that even if glycerine shortages grow more acute, a substitute should not be used in drug products "unless absolutely necessary."

During World War II, the drug industry had first call on glycerine stockpiles after munitions supplies were met. The unquestioned non-toxicity of glycerine is an important factor in its use in drugs and pharmaceuticals.

#### U. S. Vitamin Corporation Buys Arlington Chemical Co.

U. S. Vitamin Corporation, New York, has announced through its president, H. B. Burns, the purchase of time-honored Arlington Chemical Company of Yonkers, New York. The 72,000 square foot plant, together with a large new building to be constructed thereon, will be utilized to enlarge the services of both U. S. Vitamin and Arlington to the medical and pharmaceutical professions.



# NORTH CAROLINA MEDICAL JOURNAL

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## JAUNDICE

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CHICAGO, ILLINOIS

Jaundice, or hyperbilirubinemia, is an important subject to both the general practitioner and specialist alike; it always presents an interesting diagnostic problem. To have ways and means of coordinating and simplifying the subject is imperative, so that with the diagnostic armamentarium at hand a diagnosis may be readily reached and proper therapy instituted. A thorough knowledge of the pathologic physiology involved results in a more rapid and accurate diagnosis than does the memorized knowledge of the hundred and one conditions which might be associated with this symptom. It is with this last thought in mind that the subject is presented.

### *Physiology*

The fate of a normal red blood corpuscle seems to be the proper approach to the understanding of icterus. It is recalled that the normal erythrocyte eventually terminates its existence by being broken down in the spleen. In this organ the disintegrated red cell is divided into an iron-containing part (hemosiderin) and an iron-free part (hematoidin). The iron-free part is the precursor or mother substance of the main bile pigment called bilirubin.

As the iron-free part of a broken down red corpuscle is delivered from the spleen to the general circulation, it comes in contact with the reticulo-endothelial system, which is a specialized network of cells arranged around the vascular system. These cells have the ability to convert the iron-free part of the red cell into bilirubin. This bilirubin is attached to a heavy protein molecule; hence

it is designated as bilirubin proteinate. It is in this form that it is delivered to the liver.

The liver splits the bilirubin proteinate and excretes pure bilirubin, via the hepatic duct, into the gallbladder. When the gallbladder contracts, bilirubin is delivered into the intestinal tract, where it is acted upon and broken down by bacteria to its end metabolite, known as urobilin (urobilinogen). Some of this urobilin passes out and colors the feces; the remainder is absorbed from the intestinal tract and is carried back to the liver via the portal system. One of the many functions of the liver is to reconvert the end product, urobilin, back to its early predecessor, bilirubin.

### *Clinical Classification*

To comprehend thoroughly and classify jaundice clinically, one must understand this physiologic process and continually keep in mind the difference between bilirubin and urobilin.

Many classifications have been presented, each having its respective good points and drawbacks. A classification which has served us well divides jaundice into the following types:

1. Prehepatic
2. Intrahepatic
3. Posthepatic

In this way we can identify the lesion as to its location before the liver, in the liver, or after the liver.

### *Prehepatic jaundice*

In icterus which develops from a prehepatic lesion, the same pathologic condition may be found in the red blood cell. A typical example is familial hemolytic icterus. In this condition the red cells are apparently defective and, instead of being the usual

Read before the Second General Session, Medical Society of the State of North Carolina, Pinehurst, May 9, 1951.

From the Departments of Surgery of the University of Illinois, Cook County Postgraduate School of Medicine, Cook County Hospital, American and Alexian Brothers' Hospitals.

normal biconcave disks, appear as "golf-ball" red cells. They are also smaller than the normal cell; hence the condition has been referred to as microcytic spherocytosis.

These cells have an increased fragility, and rupture easily. As a result, an excessive amount of iron-free pigment is excreted by the spleen, resulting in an excessive amount of bilirubin proteinate, which is formed by the reticulo-endothelial system. This results in jaundice due to the hyperbilirubinemia. However, since the bilirubin is in the form of a proteinate, and since the molecule is too heavy to pass through the kidney, the urine does not show the color that one would expect in the jaundiced patient (acholuric jaundice).

Since an increased amount of bilirubin is being delivered to the liver, a greater amount is also excreted into the intestines, resulting in an increased formation of urobilin in the intestinal tract. Not only is a large amount of urobilin excreted in the feces, but the remainder is returned to the liver. The liver converts as much of this substance into bilirubin as it can, but the remainder overflows into the urine, resulting in an increased urobilinuria. Should the Erlich aldehyde test for urobilin be applied to such a urine, it would be strongly positive; however, liver function tests would be negative. The van den Bergh test is of some value here, since a prehepatic jaundice gives a positive indirect and negative direct test.

Other examples of prehepatic jaundice are icterus neonatorum and hypersplenism. In the former, too many red blood cells are destroyed, and in the latter the spleen is hyperactive.

#### *Intrahepatic jaundice*

In this type of jaundice the lesion is located in the liver. It must be remembered that the entire liver does not become involved at once; if this were to occur, death would promptly ensue. Any toxin—be it chemical or bacterial—or any organism may so injure the liver that one or more of its important functions is interfered with. Typical examples range anywhere from a simple catarrhal jaundice to a fulminating acute yellow atrophy.

When the liver is damaged, one or more of the liver function tests show signs of

hepatic dysfunction. The literature is replete with various liver function tests, and to attempt to utilize many of these is impractical. Many workers in this field have their favorite test or group of tests; at times we use some of them. For practical purposes, however, we prefer to confine ourselves to the aldehyde test for urobilin, and the cephalin flocculation test of Hanger. If the lesion producing the jaundice is intrahepatic, then both of these tests are found to be positive.

#### *Posthepatic jaundice*

In jaundice caused by posthepatic lesions, we assume that the pre- and intra-hepatic functions are progressing normally. The most common examples of posthepatic jaundice are: common duct stones, carcinoma of the common and hepatic ducts, carcinoma of the head of the pancreas, and metastases to the porta hepatis.

The obstruction to the flow of bile into the intestinal tract may be partial or complete. If the obstruction is partial, some bilirubin gets into the intestinal tract and is converted into urobilin. That urobilin which returns to the liver is converted to bilirubin, since the lesion is not an intra-hepatic one, and the aldehyde test for urobilin will be negative. If, on the other hand, the obstruction to the outflow of bile is complete, no bilirubin gets into the intestinal tract, and no urobilin is formed; therefore, the aldehyde test will again be negative. Liver function tests in posthepatic jaundice reveal normal functioning livers, unless the jaundice has been present well over a month and is of a severe degree; a biliary cirrhosis then forms.

#### *Diagnosis*

Since diagnosis constitutes the most important part of all medicine, no detail must be overlooked. In evaluating the diagnostic possibilities of each case, nothing can replace the recording of a careful and accurate history.

A detailed physical examination is equally revealing. It must be recalled too, that, although most cases of jaundice can be categorized into pre-, intra-, and post-hepatic jaundice, there may still be an overlapping of these lesions. For example: as Watson, Popper, and others have emphasized, obstructive jaundice may also be associated with intrahepatic pathology; such lesions are



assumed to be "cholangiolitic" lesions. By the same token, a true posthepatic obstructive jaundice may be present for a period of three to four weeks or longer, and result in liver damage producing a biliary cirrhosis. The true clinician and alert surgeon keep such possibilities constantly in mind. Courvoisier's law is helpful. It states that in the absence of jaundice a large gallbladder usually suggests a cystic duct obstruction (mucocoele of the gallbladder); a small gallbladder plus a jaundice usually indicates a stone in the common duct; and, finally, a jaundice in the presence of a large gallbladder speaks for a carcinoma of the head of the pancreas.

One can also differentiate the various sites of carcinoma which involve the biliary tract. For example: in carcinoma of the gallbladder, jaundice is *not* present, but a hard nodular mass which moves with respiration is palpable in the right upper abdominal quadrant; in carcinoma of the common duct, jaundice plus a portal vein complex (ascites, dilated esophageal varices, hemorrhoids, etc.) is present; carcinoma of the ampulla of Vater is suspected in the presence of jaundice plus signs of pancreatic insufficiency; and, finally, carcinoma of the head of the pancreas can be diagnosed when jaundice plus an inferior vena cava complex (bilateral dependent edema and dilated veins of both inferior extremities) is noted.

The differentiation between a stone and a carcinoma of the common duct may not be too difficult; however, it should be remembered that, contrary to the usual conception, a carcinoma may produce colic and a stone may be silent. Taking an icterus index on five successive days might clarify the diagnosis. If the lesion is a carcinoma, the icterus index is high and continues to rise; however, it is possible for an icterus index to drop if there is some slight ball-valve action in the presence of a stone. Many other means are available for differentiation—some of which have been discussed.

Unfortunately, pruritus (itching) is considered to be a symptom of jaundice; this is erroneous. Pruritus is a symptom of posthepatic (obstructive) jaundice. When the patient's primary complaint is itching, we feel quite positive that he is suffering from either a stone or a carcinoma which is involving the extrahepatic biliary passages.

Rarely does a patient with intrahepatic jaundice complain of itching.

The pulse is usually slow in cases of icterus. We prefer a bradycardia in such cases, because when the pulse becomes rapid it usually forbodes an oncoming acute yellow atrophy or hepatic decompensation.

Although numerous laboratory tests are at our disposal, I have a preference for the Ehrlich aldehyde test for urobilinogen, serum alkaline phosphatase, and the cephalin flocculation test. If the lesion is prehepatic—the urobilinogen test is positive and the liver function tests are usually negative; if the lesion is posthepatic, both of these tests are negative. No tests are foolproof; however, the statements just made are found to be true in the vast majority of cases. It may be safe to state, however, that when a serum alkaline phosphatase is over 15 Bodansky units, and when the total cholesterol is above 300 mg., a surgical rather than a medical type of jaundice is indicated.

It seems to be a waste of time, effort, and money to do a Graham-Cole test on jaundiced patients. The negative response found in these patients is most misleading. On the other hand, a flat x-ray film of the abdomen should always be taken. Space does not permit a discussion of the other tests available to the clinician; however, one should always keep in mind that, since no test is foolproof, diagnostic pitfalls are always present.

### *Treatment*

There has been a tendency not only to classify but to discuss the treatment of jaundice under the headings of medical and surgical jaundice; this seems both impractical and misleading. In the presence of jaundice, one never knows whether the condition will eventually call for a medical or surgical regimen, and, since both types of therapy overlap, it seems preferable to consider them together.

### *Preoperative care*

Preoperative care is a major factor if a jaundiced patient is to be brought through a surgical procedure successfully. Among the essentials, we might include electrolyte, water, and protein balance; vitamin therapy—especially K, B, and C; and an adequate glycogen supply to the liver.

The severe pruritus which may be associated with jaundice can sap much of the patient's strength and energy. Recently we

have found that intravenous procaine in a 0.1 per cent concentration gives rather rapid and marked relief from itching in most instances. One thousand cubic centimeters are given, never exceeding the rate of 1000 cc. in one hour. A word of caution, however, should be mentioned: Since the drug is a convulsant, its use in concentrated solutions or rapid injection of dilute solutions may produce irreparable damage.

We feel that blood transfusions should be utilized not only as an operative or post-operative measure, but also as a method of supplying many of the previously mentioned needs. Preoperative laboratory tests, such as blood counts, icterus indices, prothrombin, bleeding and coagulating time, blood protein determination, and A-G ratio, are all of value. However, none of these can replace the clinical impression gained by the seasoned diagnostician as he watches his patient through this "build-up" period.

#### *Surgical procedures*

Many operative procedures, both curative or palliative, have been described for the jaundiced patient; the type of lesion determines the type of surgery. I am of the opinion that metastases do not determine operability; the only determining factor is fixation of the primary growth and surrounding vital structures. If the primary lesion is not fixed to a vital structure, even in the presence of operable metastases, we feel that Brunschwig's idea in attempting to remove as much of the malignant tissue as possible is a valid one. Alexander has further stressed this point by suggesting the removal of solitary pulmonary metastases. The monumental work of Whipple in carcinoma of the pancreas has brought those cases which were considered inoperable only a few years ago into the realm of operability.

One cannot discuss the surgical treatment of the common duct unless he is conversant with the surgical anatomy of this structure. It is quite simple and practical to consider the common duct as being divided into four parts, each being related to the duodenum:

- Part 1—Supraduodenal portion
- Part 2—Retroduodenal portion
- Part 3—Infraduodenal portion  
(pancreatic)

Part 4—Intraduodenal portion

Regardless of where the stone is located, only part 1 is immediately accessible to the surgeon; therefore, the incision is placed

here. A stone in either part 1 or part 2 is usually easy to remove by means of a supraduodenal choledochostomy. I prefer to drain the common duct rather than close it, because in the presence of edema and infection one never knows when a suture might cut through.

A stone located in part 3 causes no concern unless it is imbedded in the duct wall. If the stone is freely movable it can be moved into part 1 through a supracholedochal incision. However, if the stone has become firmly fixed in an ulcerated and edematous part of the duct wall, it cannot be dislodged. Some surgeons advocate mobilization of the duodenum to remove such a stone. Since this part of the common duct passes through the head of the pancreas and not between the pancreas and duodenum, and since this area is surrounded by a cage of vessels (superior and inferior pancreaticoduodenal arteries), this maneuver seems impractical and at times is impossible. It is only of value when the stone has eroded through the duct and head of the pancreas—an unusual occurrence.

A preferable method of handling such impacted stones in part 3 is the following: The flat x-ray film, which must be in the operating room, is examined; it is noted that this is a flat film, and no dye has been given. If the stone is not seen on this flat roentgenogram, we conclude that it is a cholesterol stone. If such be the case, a catheter, not a T tube, is placed from part 1 of the duct downward to the stone—and is sutured into the common duct. After twenty-four to forty-eight hours, a few drops of ether are injected into this catheter every morning and every evening. Since cholesterol is soluble in ether, most of these stones will dissolve and disappear without further manipulation. If, on the other hand, the impacted stone in part 3 is seen on the flat x-ray film, we conclude that it is high in calcium content, which usually is not affected by the etherization method of treatment. In such an instance, a short-circuiting operation is done to relieve the jaundice, which, after all, is of far greater and immediate importance than the presence of a stone. The procedure which we prefer is a cholecystojejunostomy.

This brings up the necessity of determining whether or not the common duct should be explored. Such a decision must be made prior to performing a cholecystectomy, since,



if the gallbladder is removed and it becomes necessary to do a short-circuiting procedure, it usually is more difficult to do a choledochojejunostomy than a cholecystojejunostomy. The indications for exploring the common duct are too well known to bear repetition here. If exploration is indicated, the necessary procedure is carried out, and the gallbladder removed, if there is no need for its utilization in an anastomotic procedure.

A stone in part 4 is also approached through an incision in part 1. Occasionally such a stone will dilate the ampulla of Vater, and then it can be pushed into the duodenum. If this is impossible, the middle of the descending portion of the duodenum is opened and the stone is extracted transduodenally. The duodenum is then closed.

Drains in the common duct can be removed when it is certain that bile is flowing freely into the duodenum. This can be determined by means of contrast media with the x-ray, tying off the tube or inspecting the color of the feces. Although common duct tubes have been removed anywhere from a few days to many months postoperatively, I am of the opinion that the average common duct tube should be removed somewhere between a two and four week period.

There are cases in which it is impossible to determine preoperatively whether the condition is due to a stone or a neoplasm, and whether or not the latter is operable. Although some cases might appear inoperable preoperatively, such patients should not be denied at least the chance of an exploratory operation. Occasionally a life can be saved by removing a stone which was thought to be a neoplasm, or by removing a neoplasm which was thought to be nonresectable.

#### *Postoperative management*

The postoperative management is as vital to a successful result as is the operative procedure itself. This part of the treatment should not be relegated to the uninitiated, but is preferably handled by someone who is thoroughly conversant with the modern approach to this all-important phase of therapy.

#### *Summary*

1. The proper approach to the subject of jaundice, both diagnostically and therapeutically, is a thorough understanding of the pathologic physiology of the metabolism of the bile pigments.

2. It has been found advantageous to classify jaundice clinically into three groups—namely, pre-, intra- and post-hepatic.

3. Dividing the common duct into supra-, retro-, infra-, and intra-duodenal portions, aids in standardizing the various operative procedures applied to common duct surgery.

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### THE DANGERS OF OBSCURING SERIOUS DISEASE BY EARLY CHEMO- THERAPEUTIC TREATMENT OF MILD SYMPTOMS

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Physicians are constantly faced with a "doctor's dilemma." Patients present themselves for *treatment* of symptoms which they have observed. When the symptoms are mild, the physician must decide whether they are inconsequential or represent the incipient stage of a serious disease. Unfortunately, the difficulty of establishing a definite diagnosis is greatest during the early period of an illness. Should the physician institute some positive measures, which the patient expects or even demands, or should he delay treatment until the diagnosis is clear? The old adage, "An ounce of prevention is worth a pound of cure," is never more true than in infectious diseases. Specific therapy administered during the golden period of the first few hours of an infection will often succeed in aborting the illness. If specific therapy is delayed, however, until the clinical picture has developed more fully or until the results of bacteriologic cultures are obtained, the hours lost may mean the difference between relatively mild and severe disease.

The difficulty in diagnosis when symptoms are mild is matched by the problem in therapy. Should the physician treat the patient symptomatically with simple drugs which will not interfere with the natural course of the disease, or administer specific chemotherapy solely on suspicion? If there is some

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clue to the nature of the disease—for example, a history of a relapsing disease such as malaria, or the recent withdrawal of prophylactic or suppressive chemotherapy—the problem becomes much simpler. If no such clue exists, of what value will chemotherapy be? One of the most serious problems which has been created by the introduction of potent specific therapeutic agents is that of deciding when to use these drugs and which ones to choose.

Penicillin is probably the safest drug to use and is one of the most effective, because of its bactericidal property; unfortunately its therapeutic spectrum is narrow. Sulfadiazine has a wider therapeutic spectrum, but it is only bacteriostatic and the incidence of toxic reactions after its administration is much greater. Aureomycin and chloramphenicol, the newer antibiotics, apparently have a wide therapeutic spectrum and are relatively safe. They are expensive, however, and side effects such as nausea, sore tongue, or diarrhea are common.

The greatest objection to the administration of potent chemotherapeutic agents before a definite diagnosis has been made is that it alters the clinical picture of the illness. The development of the full-blown disease may be suppressed, and the pathologic process may smolder in a state of inactivity without healing. The usual symptoms will be obscured, or may not develop at all.

In most cases, chemotherapy is simply an adjunct to other means of treatment. In the final analysis, the patient is cured by the development of his own immunity. Most chemotherapeutic agents are effective only against growing organisms, and hence those which are bacteriostatic will not be effective in smoldering, walled-off infections. Chemotherapy cannot replace time-honored surgical measures for the drainage of pus or the relief of obstruction. If the symptoms which may be expected to result from such conditions are obscured by chemotherapy, the institution of necessary therapeutic measures may be delayed.

#### *Illustrative Cases*

The following abstracts of actual case histories illustrate some of the problems encountered after the administration of chemotherapeutic agents before the establishment of the diagnosis.

### *Rheumatic fever*

#### *Case 1*

A 31 year old shipping clerk was admitted to another hospital complaining of dyspnea. His disease had had an acute onset characterized by chills and fever, accompanied by joint pains. Short courses of therapy with penicillin, streptomycin, aureomycin, and chloramphenicol produced no improvement. After ten days, he began to have pain in his chest, cough, and dyspnea, and was referred to the North Carolina Baptist Hospital.

On admission the patient was acutely ill and orthopneic, and there were signs of fluid in the left lung base. A rough murmur appeared over the cardiac area during the course of the next few days, and was interpreted as indicating the development of pericarditis. During the next two weeks, a soft diastolic murmur developed in the third left interspace, and ten days later a similar murmur could be heard at the apex of the heart.

More than fifteen blood cultures and various other bacteriologic studies, including cultures of the urine, throat, stools, pleural fluid and sputum, were of no aid in establishing the diagnosis. Agglutination tests with typhoid H antigen were positive in a dilution of 1:320, but not at higher levels. The same antibiotic drugs which had previously been administered were given in successive courses of seven to ten days each. The doses were large, the daily totals being 3,000,000 units of penicillin, 2 Gm. of streptomycin, and 4 Gm. of aureomycin. After a hospital stay of eight weeks the fever gradually subsided, and the patient was discharged to continue convalescence at home.

Did this patient have pneumonia with empyema and pericarditis, subacute bacterial endocarditis, typhoid fever, or an exacerbation of acute rheumatic fever precipitated by a severe respiratory infection? All of these diagnoses were seriously entertained, but none could be definitely proven, in spite of a long and expensive period of hospitalization. What prognosis and advice should have been given this patient? If he had bacterial endocarditis, chemotherapy should have been continued for several weeks after discharge; his cardiac reserve would be expected to diminish and evidence of renal damage to appear. If the disease was rheumatic fever, the patient's activity should have been restricted for some weeks, and prophylactic chemotherapy to prevent a recurrence should have been considered. (Fortunately, the patient remained well over the next year and a half, though the diastolic murmurs became more pronounced and the heart enlarged somewhat. This sequence of events tended to confirm the diagnosis of rheumatic fever—a diagnosis which might have been made early in the course of his illness except for the premature administration of chemotherapeutic agents.)



## *Subacute bacterial endocarditis*

### *Case 2*

A 30 year old saleswoman was admitted to another hospital complaining of bouts of fever lasting four to five days and accompanied by frontal headaches. Five months before admission she had had a transient attack of tenderness and pain in the ankle and knee joints. This was followed by frequent attacks of "sinusitis," with headache and fever. Each of these was treated with short courses of penicillin. A blood culture was negative.

When she was admitted to the North Carolina Baptist Hospital a loud apical systolic murmur could be heard. No petechiae were seen, and the spleen was not palpable. The leukocyte count was within normal limits. Repeated blood cultures revealed a slow growing, partially anaerobic streptococcus; the organism was relatively resistant to penicillin. Similar organisms were grown in small numbers from the cerebrospinal fluid.

Two hospitalizations of four weeks each and massive chemotherapy were required to produce a cure. The infection finally responded to huge doses of penicillin, after prolonged therapy with large doses of aureomycin had proved ineffective, and after mild congestive heart failure had developed as the result of myocardial damage. Apparently the exposure to repeated short courses of penicillin given for the mild initial symptoms had caused the organisms to mutate to a relatively resistant form. (The correlation of clinical and bacteriologic findings in this case is of such interest that it is being reported separately<sup>(1)</sup>).

## *Empyema of the gallbladder*

### *Case 3*

An elderly woman was admitted to another hospital because of pain in the right upper quadrant, accompanied by fever. This episode was preceded by indigestion which had been present for a period of months. A diagnosis of cholecystitis was made, and the patient received combined antibiotic therapy with penicillin and streptomycin. The temperature promptly returned to normal levels, and the patient was scheduled for discharge. On a hunch, the surgeon made a careful re-examination which revealed a mass in the right upper quadrant. An exploratory operation was performed and a ruptured gallbladder containing stones was discovered.

In this case the prompt institution of chemotherapy had suppressed the dramatic symptoms usually produced by localized pus, and had obscured the correct diagnosis.

## *Bacteremia*

### *Case 4*

A 68 year old farmer was admitted to the North Carolina Baptist Hospital complaining of pain in the right side. Because of his critical condition, details of the illness were difficult to obtain. A tentative diagnosis of appendicitis had been made in the home by his family physician, and penicillin had been administered for two days without improvement. On admission, tenderness to palpation in the right upper quadrant, with muscle spasm and rebound tenderness, was detected. Peristalsis was active. Because of the severity of his symptoms, therapy with penicillin was continued and sulfadiazine was started promptly. An exploratory laparotomy four days later did not reveal the cause of his symptoms. Four blood cultures which had been made on admission were then discovered to

be positive for *Aerobacter aerogenes*. Streptomycin was substituted for the sulfadiazine, and the patient gradually recovered.

Inadequate treatment for symptoms of abdominal pain did not prevent the development of bacteremia in this case, but led to an unnecessary operation. The site of entry of the organisms was never discovered, but was presumed to be the gallbladder.

## *Pylephlebitis?*

### *Case 5*

A 25 year old housewife was admitted because of chills which occurred every six hours, and fever as high as 106.2 F. Four weeks before admission symptoms suggesting influenza had developed. Just before the delivery of her second child in another hospital, penicillin was administered prophylactically, but the delivery proved to be uncomplicated. Twelve hours *post partum*, however, she had a hard, shaking chill. Penicillin was resumed and was supplemented with sulfadiazine. Because the symptoms were not arrested, she was referred to the North Carolina Baptist Hospital ten days later. A final injection of 1,000,000 units of penicillin was given as she started the trip.

On examination a systolic murmur, which was known to have been present for several years, was clearly heard in the first left interspace. The liver was palpable and tender; the spleen was palpable. In the right upper quadrant, a mass could be felt through to the back. Repeated blood cultures were negative. Liver function studies showed a marked decrease in hepatic efficiency. No evidence of pelvic thrombophlebitis was detected. A diagnosis of pylephlebitis was made, and heparin and Dicumarol were given to arrest progression of any thrombotic process. Aureomycin, an antibiotic with a wide therapeutic range, was administered orally in doses of 4 Gm. daily. The temperature became normal within eight days, and the patient was discharged to continue her convalescence at home.

Prophylactic chemotherapy did not prevent symptoms of infection in this case. Therapy with penicillin did prevent recovery of any organism, however, even though it did not cure the process.

## *Subphrenic abscess*

### *Case 6*

A 46 year old executive was admitted to the North Carolina Baptist Hospital with a long history of a duodenal ulcer which had gradually produced obstruction. A gastric resection was done, and penicillin was given prophylactically after the operation. On the fifth postoperative day a sudden pain developed under the left costal margin. Peristalsis did not cease, but signs of fluid appeared in both lung bases. After thoracentesis a pronounced inspiratory rub, accompanied by pain on inspiration, was heard on the right side in the mid-axillary line. Penicillin was supplemented with sulfadiazine, and the symptoms gradually became less severe.

Fluoroscopy showed limited movement of the right diaphragm and purulent material was aspirated from beneath the right diaphragm. The aspiration was followed by a chill. Operation for drainage of the subphrenic abscess was delayed as long as possible, but eventually became necessary. Chemotherapy was discontinued four days after this

operation. Twelve days later the temperature began to rise again, and chemotherapy was reinstituted. The temperature again fell to normal in eight days, and the patient was discharged after a hospital stay of nearly seven weeks.

In this case prophylactic chemotherapy did not control the symptoms of infection resulting from leakage at a suture line, and did not prevent the necessity for surgical drainage. The short course of penicillin and sulfadiazine given after open drainage suppressed further symptoms of the infection temporarily. A longer course of adequate chemotherapy was necessary to cure the process.

### *Hypernephroma*

#### *Case 7*

A 64 year old merchant entered the hospital complaining of a cough which had troubled him for two years. Four months before admission he began to have night sweats and a low grade afternoon fever. Twelve years before admission a calculus had been removed from his right kidney, and two years later a left nephrectomy had been performed because of a staghorn calculus. For several years he had received intermittent chemotherapy with sulfonamides for mild urinary tract infections. His cough had been treated with inhalations of penicillin dust, supplemented with intramuscular injections, and this treatment had been followed by a desquamation of the skin and soreness of the mouth and lips. He was referred to the North Carolina Baptist Hospital for further diagnostic study.

Physical examination revealed an overweight, chronically ill man with no positive physical findings. Bronchiectasis was suspected but was not proved at bronchoscopy. He was discharged with instructions to use penicillin aerosol by inhalation. He returned six weeks later, having continued to run an irregular temperature as high as 101 F. The cough was greatly improved, but in the left upper quadrant could be felt a smooth cystic, tender mass the size of a grapefruit, which descended slightly on inspiration. It was thought that the patient had a walled-off abscess in the left upper quadrant, symptoms of which had been suppressed by chemotherapy for his suspected bronchiectasis. The origin of the suspected infection could not be determined. At exploration the mass was found to be an inoperable hypernephroma arising in the kidney bed at the site of the nephrectomy.

In this case the response of the respiratory symptoms to chemotherapy gave a temporary false sense of security and helped to delay the correct diagnosis.

### *Septicemia*

#### *Case 8*

A 52 year old farmer was admitted to the hospital in a delirious condition, with high fever. He had apparently been in good health until seven days prior to admission, at which time he was suddenly seized with severe frontal headache and fever. His illness was diagnosed by his family physician as influenza, and he was given 12 sulfonamide tablets. Two days later he had a chill and received a single injection of penicillin. Slight subjective improvement and a decrease in fever were noted, but during the next four days the patient's condition gradually grew worse, and he finally became irrational. He

was transferred from his home to the North Carolina Baptist Hospital.

On admission he was acutely ill, and the neck was stiff. No other positive physical findings were elicited. Blood cultures were planted, and a staphylococcus which was resistant to penicillin, but susceptible to streptomycin slowly grew out of the first two cultures. Studies of the spinal fluid, including cultures, were negative. The patient was given combined therapy with streptomycin and sulfadiazine, and gradually recovered.

In this case the portal of entry for the staphylococcal organism was apparently the respiratory tract. The administration of inadequate chemotherapy did not prevent the development of septicemia, but made the recovery of the organism difficult.

### *Tuberculous meningitis*

#### *Case 9*

A 27 year old housewife was admitted to another hospital complaining of intermittent pain radiating around the left flank to the bladder, and associated with burning on urination, frequency, and nocturia. After she had received penicillin, streptomycin and sulfonamides, a nephropexy was performed. Headache, persistent fever, and chills developed after this operation, and she was referred to the North Carolina Baptist Hospital.

Although the patient was chronically ill, the positive physical findings were limited to splenomegaly. The neck was not stiff, but the cerebrospinal fluid showed a mononuclear response. All cultures of the blood and spinal fluid were negative. One of many cultures of the urine was positive for a coliform organism. Penicillin and sulfacetamide were given over a period of two and a half weeks, but no further chemotherapy was administered during the remainder of her eleven weeks' hospital stay. Though tuberculous meningitis was suspected, she became afebrile and asymptomatic and was discharged without a definite diagnosis.

One month later she was readmitted with essentially the same complaints of headache and fever. Examination of the guinea pigs injected with spinal fluid on the first admission revealed the presence of tuberculosis. Apparently the chemotherapy given for the urinary symptoms had been sufficient to suppress the organisms in the meninges to the point where they could not be stained or grown on culture. Treatment with streptomycin relieved her symptoms and caused the organisms to disappear from the spinal fluid. The patient was transferred to a sanatorium for further therapy, and has since been discharged as an arrested case.

### *Comment*

The cases which have been presented illustrate the danger of obscuring the diagnosis and blunting the effectiveness of chemotherapeutic agents by giving them without adequate preliminary studies. Even though the physician is anxious to begin specific therapy for symptoms suggesting an infection, a therapeutic trial of chemotherapy cannot replace careful diagnostic study. Such a study should include a detailed history, followed by complete physical examination with meticulous attention to small details such as the pres-



ence of petechiae. Every attempt should be made to demonstrate the organism by stain or culture before beginning treatment with a chemotherapeutic agent. Once the organism has been identified, *in vitro* tests of susceptibility can be used in selecting the type of drug and the most effective route of administration<sup>(2)</sup>. Therapy should be initiated with an adequate dose of the drug—as large as seems necessary to obtain blood and tissue levels indicated by the *in vitro* test<sup>(3)</sup>. In many instances a large “priming dose” is indicated to raise tissue levels rapidly. Once therapy has been started, the drug chosen should be given in full doses for at least five days before a change is considered.

Another danger associated with the indiscriminate use of chemotherapeutic agents is that of toxic reactions. Often these reactions are inseparable from the beneficial effect; an example is vestibular nerve damage caused by streptomycin in large doses. Almost all the chemotherapeutic agents used widely up to the present time have been responsible for occasional cases of hemolytic anemia, agranulocytosis, or damage to the liver or kidneys. The local reaction to the wax in which slowly acting penicillin is sometimes suspended is now well known. Another symptom which may be produced by the prolonged or repeated administration of chemotherapeutic agents is drug fever<sup>(4)</sup>. Repeated topical use of drugs, particularly antibiotics, leads frequently to sensitization of the skin or mucous membranes. The cross sensitization between penicillin and trichophyton which causes athlete's foot is now well recognized; the administration of the antibiotic may cause the fungus infection of the skin to flare up. In other cases, penicillin may combine with the serum albumin of the patient, forming a new antigen which will result in the production of precipitins in the serum. The clinical picture of serum sickness may then follow. We have observed an instance of a serum sickness type of reaction to the peanut oil used as a menstruum for the administration of penicillin. In this case the antibiotic had been administered for symptoms of bursitis—a disease which is rarely helped by chemotherapy.

#### Conclusions

If indiscriminate use of chemotherapeutic agents for treatment of symptoms is continued, diagnoses will be obscured and necessary measures for proper care of patients

often will be delayed until serious disease has developed. Repeated administration of chemotherapy will lead gradually to the development of drug-fast strains of organisms, against which the most potent weapons available for treatment of serious disease will be rendered partially, if not wholly, ineffective. Careful preliminary diagnostic studies should be done before a therapeutic trial of chemotherapy is considered. In the final analysis, however, there is no substitute for the clinical judgment of the physician in deciding whether symptoms are inconsequential or are the early manifestations of serious disease.

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## INTRA-UTERINE FETAL DEATH

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The present study of intra-uterine fetal death deals only with those cases occurring after the stage of viability but prior to the onset of labor. This immediately eliminates approximately 50 per cent of all stillbirths.

#### Incidence

Stander of New York has reported the total incidence of stillbirths to be 2.4 per cent<sup>(1)</sup>. Dienna found an incidence of 2.0 per cent in 45,750 deliveries<sup>(2)</sup>; Potter in Chicago noted 2.5 per cent<sup>(3)</sup>; and Robinson of Canada reported 2.3 per cent<sup>(4)</sup>. The incidence in North Carolina in 1948 was 2.43 per cent<sup>(5)</sup>.

Various authors<sup>(3, 6)</sup> have reported that stillbirths occurring prior to labor constitute anywhere from 0.7 to 2.3 per cent of all births, the majority of reports being about 1.2 per cent. For practical purposes the incidence of intra-uterine fetal death can be taken to be about 1 per cent, and as comprising

approximately one half of the total stillbirths encountered by a clinician.

### Causes

Classification of these deaths according to causes has resulted in a host of systems of varying clarity. In table 1 the causes are listed in order of frequency, a grouping felt to be of the greatest practical value. The approximate percentages were determined from the figures of several investigators<sup>(2, 3, 6, 7)</sup>.

Table 1

Classification of Deaths in Utero	
Cause	Percent.
Maternal toxemia .....	20
Placental causes .....	20
Fetal malformations .....	10
Cord conditions .....	10
Erythroblastosis fetalis .....	5
Maternal diabetes mellitus .....	5
Miscellaneous .....	10
Unknown .....	20

Reported deaths *in utero* from unknown causes ranged from 50 per cent or more<sup>(6a)</sup> to 20 per cent<sup>(6d)</sup>. After reviewing the literature, however, one feels that a lower figure is more nearly correct, and that by proper methods of study even more of those cases in the unknown group could be put in one of the other groups.

### Syphilis; toxemia

Years ago syphilis always headed the list of causes of death *in utero*, accounting for 35 per cent or more<sup>(6b, c)</sup>. The rate has dropped drastically during the past twenty-five years, and is now approximately one fifth of what it was even ten years ago<sup>(7a)</sup>. The rate of stillbirths in syphilitic mothers who have been treated with penicillin is now less than 2 per cent<sup>(8)</sup>. Toxemia, which has always been high on the list, is now the leading cause.

### Placental causes

Placental causes, principally placenta previa and premature separation of the placenta, account for a relatively large percentage of the deaths, but require little discussion. These conditions are usually associated with labor and delivery, although fetal death may occur prior to the onset of labor. For this reason there is some overlap in the figures, and the percentage may be a little high.

Fetal malformations are fairly common, usually obvious, and rarely preventable. If autopsies were done on all stillborn infants, more of these malformations would be found, and some of the deaths in the "unknown" group would be explained.

### Cord conditions

The significance of cord conditions as a factor in fetal death has been the subject of much debate. Review of the literature, however, surprisingly reveals a rather clear-cut role. The most common cause of death in this group, as indicated by ample statistics, is strangulation by the cord around the neck. Other conditions of the cord more rarely cause death. True knots have been proven to be responsible by Browne<sup>(9)</sup>, who collected 26 cases and, by means of a cannula, demonstrated the blockage of the umbilical vessels. The literature is full of isolated case reports of this condition<sup>(10)</sup>. Localized constriction of the cord, thought to be due to endarteritis, is rare, but can be fatal<sup>(9)</sup>. Torsion of the cord sufficient to interfere with circulation may possibly occur, but is discredited by many authorities as a cause of death. It is felt that this extreme torsion is most likely a postmortem change, possibly caused by vigorous agonal movement of the fetus. Rupture of the cord, with or without velamentous insertion, has also been mentioned as a cause of death. Like many of the other conditions, this is almost universally associated with an abnormally short cord.

### Erythroblastosis

Erythroblastosis fetalis is now looked upon as an important cause of intra-uterine fetal death, whereas 10 years ago it was infrequently mentioned. Vaughan, Diamond and Allen<sup>(7f)</sup>, in an analysis of 123 recent cases of this disease, found the over-all incidence of stillbirths to be 26 per cent. They further noted that in sensitized mothers with no history of previous erythroblastotic children or transfusion the stillbirth rate was 2 per cent, while in sensitized mothers, with either a history of Rh positive blood transfusion or erythroblastotic infants the rate approximated 40 per cent. In addition, it was found that although the maternal titer bore little relation to the possibility of stillbirth when there was no history of affected infant or transfusion, it was important when the history was positive. With a maternal titer of less than 1:64 and a positive history, the stillbirth rate was about 3 per cent; however, with a titer of 1:64 or more, the incidence jumped sharply.

These and other authors felt that early induction of labor would prevent a number of these late stillbirths; but they also felt that the associated prematurity, especially prior



to the thirty-eighth week, more than offset any advantage. The risk of kernicterus in premature erythroblastotic infants is so much greater that the authorities have advised against early induction of labor. These authors felt that of the infants who had kernicterus, those that died (about one-third) were better off than those that lived.

#### *Diabetes*

In the pre-insulin days diabetes accounted for a large percentage of intra-uterine deaths. At present it probably accounts for less than 5 per cent. Diabetes has long been recognized as a cause of fetal death, and for this reason termination of pregnancy three weeks prior to term has been recommended. White<sup>(11)</sup> and others feel that estrogens are useful in reducing fetal mortality.

Of perhaps greater interest is the undiagnosed or prediabetic patient. Miller and his co-workers<sup>(12)</sup> have shown that the fetal and neonatal mortality is five times higher in diabetic than in non-diabetic patients. They have further shown that this rate is just as high in the five years preceding the diagnosis of diabetes, or the onset of diabetic symptoms. There is some increase in this rate for as long as fifteen to twenty years prior to the diagnosis of diabetes in the mother. These authors have also shown that glycosuria without evidence of diabetes mellitus in the last months of pregnancy is associated with as high a fetal mortality as is diabetes itself.

#### *Miscellaneous causes*

Under the heading of "miscellaneous," countless causes of intra-uterine death have been listed. Most of these, such as poisoning, anesthesia, shock, and various maternal infections, are either uncommonly rare or self-evident.

Maternal infections, including infectious parasitic infestations, have all been known to cause fetal death *in utero* at some time or other, and are, for the most part, self-evident. Maternal infection may, however, operate in an obscure fashion. In 1916, DeLee<sup>(13)</sup> reported three cases of fetal death in which the only findings were two pure cultures of streptococcus and one of pneumococcus from the fetal blood. One of the mothers had a mild pharyngitis, but the other two had no evidence of any local or systemic infection. Subsequently, several cases with similar findings have been reported. Browne and Kincaid<sup>(14)</sup> reported a case of an 18 year old

primigravida who was perfectly normal in every respect except for a history of fetal death *in utero*. A pure streptococcus was cultured from the blood of the fetal heart. This streptococcus caused intra-uterine fetal death in laboratory rabbits when injected into the maternal blood stream, but did not kill the mother rabbits.

A somewhat vague cause of fetal death is often termed "constitutional disease." In this group are included deficiency diseases, malnutrition, and debilitated states. These conditions have long been associated with increased stillbirth rates, but the exact mechanism has not been described. Also included in this category are hyperthyroidism and possibly myxedema. Kemp, who has done some interesting work in the goiter region of Canada, has shown iodine lack to be a factor of some importance<sup>(15)</sup>. By the administration of iodine, the stillbirth rate at Vancouver Hospital in 1932 was reduced to one tenth of the previous rate. Further corroborative work was done in 1947. This factor was first demonstrated conclusively in the livestock of the area.

#### *Drugs*

Drugs and poisons are occasionally mentioned as causes of intra-uterine death. So much has been written about the dangers of inducing labor with quinine that its use has been all but abandoned by obstetricians. However, it is worth re-emphasizing that there have been several reports of intra-uterine deaths caused by the use of quinine in sensitive individuals<sup>(16)</sup>.

Trauma as a cause of death *in utero* is uncommon even in this day of serious auto accidents. It is extremely rare that an injury can cause the death of the fetus without at least severe injury to the mother. The association of simple falls and bumps with fetal death is suspected of being coincidental.

So-called habitual death *in utero* is exceedingly rare, and may be listed only because an accurate diagnosis cannot be made. The possibility of a prediabetic mother should be entertained. It is conceded that this situation might rarely be an indication for early induction of labor or cesarean section<sup>(17)</sup>.

#### *Postmaturity*

One other condition which is often of much concern to the obstetrician is the possibility of death *in utero* associated with so-called

postmaturity. The evidence is reassuring. McKiddie<sup>(18)</sup> concludes that postmaturity increases the risk of fetal death, and that this increase is not entirely due to increased fetal size and attendant difficulties. He postulates that the increased risk is due to interference with the nutrition of the postmature infant *in utero*.

Rathbun<sup>(19)</sup>, however, in an analysis of 250 cases of postmaturity, concludes there is no increase in stillbirths due to postmaturity *per se*. Clayton<sup>(20)</sup>, in an excellent review of 705 cases of postmaturity, found no fetal deaths which could not be explained, and none occurring before labor. All authors emphasize the statistical increase in difficulties and complications, but the evidence indicates that this fact is due to associated situations and that there is no risk of death *in utero* from postmaturity itself.

### Diagnosis

The diagnosis of fetal death *in utero* is difficult at times. Fortunately, however, it is not always vital to make an exact diagnosis. There are two basic prerequisites to such a diagnosis—(1) cessation of fetal movements, usually abrupt, as noted by the mother, and (2) the absence of fetal heart tones. The classic symptoms described in several textbooks<sup>(21)</sup>, such as languor, malaise, chilliness, and foul taste in the mouth, are the exception rather than the rule, and are associated with infection<sup>(22)</sup>. A positive diagnosis can be made by palpation of a collapsed skull through the lower uterine segment, but this is a late sign.

There are two other inconstant symptoms which at times are helpful. Both are dependent upon the cessation of placental endocrine activity and are therefore variable, since the placenta may remain viable for some time after the fetus has died<sup>(23)</sup>. One of these is the often mentioned retrogressive changes seen in breasts and pigmented areas. The other is the complete subsidence of an existing toxemia. White<sup>(24)</sup> reported a case of this nature in dizygotic twins. In the same category the disappearance of nausea and vomiting, which occasionally persists into the last trimester, is suggestive of fetal death when associated with other signs.

Laboratory studies offer variable help. The Friedman test and similar tests are of value only when negative, for the reasons mentioned previously<sup>(25)</sup>. The maternal clotting time has been reported by several authors to

be less than five minutes in cases where fetal death has occurred<sup>(21, 26)</sup>. A reduction in the basal metabolic rate occurs also, but like clotting time, this sign is relative and of little practical value<sup>(6b)</sup> (17). Two other instruments of worth are the fetal electrocardiograph and the amplifying stethoscope. Both of these instruments are rather specialized, and are not readily available for the average physician<sup>(27)</sup>.

X-ray is probably the most consistently helpful adjunct to diagnosis we have. It was first given its value by Spalding and Horner<sup>(28)</sup> in 1922, when overlapping of the fetal skull bones was noted and thought to be pathognomonic of fetal death. Since then, however, this condition has been seen in the living fetus, and has been absent in cases with collapse of the brain substance<sup>(29)</sup>. Overlapping of the bones, together with angulation and collapse of the fetal spine, is taken as evidence of death *in utero*. Other variable x-ray signs which have been noted are general haziness of the landmarks, lack of evidence of spontaneous fetal movement in serial films<sup>(29b)</sup>, and a lack of correspondence between fetal development and the stage of gestation<sup>(30)</sup>. Roberts has reported several cases of roentgenologic evidence of gas in the fetal circulatory system as a sign of fetal death<sup>(31)</sup>.

### Treatment

In general, the treatment of these cases is conservative. Section is contraindicated except in cases of associated obstetric indications. Induction of labor is apt to be hazardous, the dead fetus being an excellent culture medium. The main requirement is reassurance of the patient and her family, especially in regard to her fear of becoming "poisoned" by the dead baby. About 80 per cent<sup>(6a, b, d)</sup> of the patients will go into labor spontaneously in less than two weeks—most of them within one week. Dippel<sup>(6b)</sup> records only one case in which the fetus was retained for as long as two months, and that without ill effect.

The possibility of abdominal pregnancy should be entertained in any prolonged instance, especially over two months. Jeffcoate<sup>(32)</sup> and others have emphasized the association of hypoestrinemia, and advocated the administration of estrogens as a means of sensitizing the uterus to favor the spontaneous onset of labor. Delivery should be by the least traumatic method, some authors



even going so far as to advocate avoidance of an episiotomy, but this is generally felt to be unnecessarily conservative. Ninety per cent of the mothers will deliver spontaneously and have an uneventful puerperium<sup>(13a)</sup>. In the presence of ruptured membranes, antibiotics and medical induction are indicated, and can usually be accomplished easily.

### Prognosis

The prognosis with regard to future pregnancies depends, of course, upon the cause. In general, however, it is considered good, since by far the majority of causes are accidental, and some are preventable. Even when the cause is unknown it is statistically safe to give the patient a favorable prognosis. That a cause can be ascertained in most instances has been established. If in every case of intra-uterine fetal death the following procedures were carried out, very few would be classified in the unknown group. These procedures include a complete autopsy of the fetus, roentgenogram of the long bones, histologic examination of the placenta, serologic, and blood grouping studies, and fetal blood cultures.

### Summary

1. The present incidence of intra-uterine fetal death is approximately 1 per cent, and constitutes about one half of the total stillbirths.
2. The causes are tabulated according to incidence as approximated from a review of the literature; toxemia; placental causes, malformations, cord conditions, erythroblastosis, and diabetes account for 70 per cent of the deaths.
3. Postmaturity *per se* is probably not a cause of death *in utero*.
4. Diagnosis is made by noting the cessation of fetal movements, absence of fetal heart sounds, and x-ray changes. Accessory signs, symptoms, and tests are helpful but variable.
5. Treatment is in general ultraconservative. Estrogens may be helpful.
6. Autopsy, x-ray of the long bones, serologic studies and blood groupings, histologic examination of the placenta, and fetal blood cultures are recommended in all cases of intra-uterine fetal deaths of undetermined cause.

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## THE RH FACTOR AND ERYTHROBLASTOSIS FETALIS

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### HIGH POINT

The fundamental basis for the recognized Rh factor was laid in 1900, when three important discoveries were made.

1. The Mendelian laws of heredity.
2. The phenomenon of iso-agglutination, recognized by Landsteiner as the basis for blood typing.
3. The phenomenon of iso-immunization, discovered by Ehrlich. It was not until 1940, however, that Landsteiner and Wiener announced the Rh factor.

With the aid of an anti-Rh serum derived from the mother of an erythroblastotic infant, Levine and others<sup>(1)</sup> demonstrated the connection between the Rh factor and erythroblastosis. They showed that more than 90 per cent of the mothers of such infants were Rh-negative. Only 50 per cent of these Rh-negative mothers, however, were found to have anti-Rh agglutinins. It was later found that blocking antibodies were present in the blood serum of the remaining Rh-negative mothers who had erythroblastotic children, and were as harmful to the infants as ordinary anti-Rh agglutinins. A method of detecting these blocking antibodies was worked out in 1944 and 1945.

### *Incidence and Etiology of Erythroblastosis*

Erythroblastosis occurs once in approximately 150 births. This number is small in comparison to the incidence of matings between Rh-negative women and Rh-positive men (13 per cent). Among the factors responsible for this discrepancy, the following have been listed:

1. Families are small.
2. Fifty per cent of the fathers are heterozygous.

3. Many Rh-negative women do not readily become iso-immunized.

4. The capacity to produce antibodies is in itself probably determined by one or more genetic factors.

Apparently the iso-immunization takes place in most cases during the latter half of pregnancy. At the present time, no measures are available—though many have been tried—to prevent the process of transplacental transfer.

It has become increasingly clear during the past seven years that, once an Rh-negative individual is immunized, either by blood transfusions or by pregnancies, the immunity is permanent.

The obstetrician is in the best position to reassure those Rh-negative women who have become unduly alarmed as a result of incomplete information and misinformation acquired from articles in popular magazines and newspapers<sup>(2)</sup>. The woman should be told, that, although the silent process of iso-immunization by the fetus cannot be controlled, she can probably have two or more normal infants before she is immunized sufficiently to have an affected child. A previous transfusion with Rh-positive blood, however, makes the outlook a good deal more pessimistic. Fortunately, iso-immunization of Rh-negative girls and women by such transfusions has become infrequent.

In all cases of erythroblastosis, complete blood studies should be carried out on the mother, father, and surviving children. From these studies we can gather certain valuable information, such as the genotype of the father and whether he is homozygous or heterozygous.

### *Prenatal and Obstetric Management of Rh-Negative Women*

All pregnant women should have their blood tested for the Rh factor. At the present time this is not being done universally.

The Rh factor is an antigen. When it is injected into an animal not possessing the same antigen, specific antibodies are produced. Rh antigen is found in the red blood cells, liver, spleen, kidneys, and salivary gland of Rh-positive individuals. Persons whose cells are agglutinated by Rh anti-serums are called Rh-positive. Rh-negative individuals possess a corresponding antigen which is designated as Hr.

Although there are three recognized types of each of these antigenic factors, the one

<sup>1</sup>Read before the North Carolina Obstetrical and Gynecological Society, Southern Pines, April 22, 1951.

<sup>2</sup>From the Burrus Clinic, High Point, North Carolina.



responsible for the great majority of clinical complications is known as Rh<sub>o</sub>, or D. Consequently, anti-D serum is the one used routinely in typing pregnant women and recipients of blood transfusions. If this principle is followed, only very rare cases of sensitization will be encountered, and none will have serious consequences before they can be detected clinically.

At the seventh or eighth month of pregnancy, 10 cc. of blood should be drawn from all Rh-negative women who had a previous transfusion or pregnancy<sup>(3)</sup>. Five cubic centimeters of oxylated blood and 5 cc. of clotted blood should be sent to a laboratory for detection of the presence of agglutinins. If agglutinins are present, then a further study must be made to determine what agglutinins are present and in what titer. One must not depend on the titer as an absolute guide to prognosis, however, for women with titers of 1:4 and 1:8 have given birth to infants who died of erythroblastosis, whereas women with titers of 1:32 and 1:64 have had only mildly affected infants. Whenever antibodies are found in any titer, further determinations must be done, and preparations must be made for giving a transfusion of Rh-negative blood to the infant *at delivery*—not two hours or twenty-four hours later.

Some writers have advocated cesarean section or induction of labor before term in women whose blood shows Rh antibodies. They claim that this will give the infant the best chance of survival. I am not fully in accord with this view. The factor of prematurity is too important to be overlooked.

#### *Management of Erythroblastotic Infants*

Infants affected with erythroblastosis may show severe hydrops and icterus at birth, or may appear perfectly normal, only to die from seven to seventy-two hours later as a result of the maturing factor in the blood. Transfusions of Rh-negative blood offer the only means of treatment for these affected infants. Recently it has been suggested that Rh-negative women who have not been pregnant may be the best donors.

All blood donors should be typed with anti-D, anti-CD, and anti-DE (or anti-CDE) serums before being considered as Rh-negative donors. As a further precaution against incompatibilities, it has been recommended

that all cross-matching, regardless of the Rh type of the patient, take into account the possibility of blocking antibodies in the recipient's blood serum. The application of Coombs reagent to the major side of the cross-match (saline-suspended donor's cells after exposure to anti-human serum) is a valuable procedure when cross-matching for transfusions.

Whenever there are indications that a transfusion may be necessary, the obstetrician should leave the cord fairly long, wrapped in sterile vaseline gauze. It seems quite important to clamp the cords of these affected infants immediately.

The Coombs test with anti-human serum (prepared in rabbits by the injection of human serum) should be done on the cord blood. A positive test indicates the presence of maternal blocking antibodies on the infant's red blood cells, and establishes the possibility of erythroblastosis. If the Coombs test is positive and if the red cell count and hemoglobin content of the cord blood are at a critical level, a replacement transfusion should be given at once.

Through a polyethylene tube attached to a needle and inserted a distance of 8 to 10 cm. into the umbilical vein, 10 cc. of Rh-negative blood is infused, and 10 cc. of the infant's blood is withdrawn. A total of 585 cc. is given and 500 cc. withdrawn. No heparin is necessary. After the transfusion a small amount of normal saline is passed through the tubing, and is followed by 5 cc. of calcium gluconate.

#### *Case Reports*

##### *Case 1*

During the seventh month of her third pregnancy, this patient's blood showed blocking antibodies in a titer of 1:64. Because of placenta praevia, a cesarean section was done three weeks before term. The infant appeared fairly normal at delivery, but several hours later was markedly jaundiced. The blood count at birth showed 13.8 Gm. of hemoglobin, 3,350,000 red blood cells, and 7 per cent normoblasts. Two transfusions, each consisting of 75 cc. of Rh-negative blood, were given twenty and forty-four hours after delivery. A blood count made one hour before the infant expired showed a hemoglobin of 17 Gm., 4,910,000 red blood cells, and 122 per cent normoblasts.

Marked sensitivity evidently existed in this case, since cesarean section three weeks before term failed to alter the course. Replacement transfusion was indicated, I believe. This was in 1948, however, and the pediatrician in charge was not giving such transfusions at that time.

##### *Case 2*

On January 29, 1948, this patient's third pregnancy was terminated by a forceps delivery for a

brow presentation. This was followed by shock, which was treated by a transfusion of 500 cc. of Rh-positive blood obtained from the patient's husband. When the patient was admitted to the hospital on December 11, 1949, with another brow presentation, a cesarean section was performed. Marked bleeding resulted, and she was transfused with blood obtained from three Rh-positive donors (including the husband) while a supracervical hysterectomy was done. The patient continued in shock, and the infant was found to be erythroblastotic. Although the patient's blood had been reported previously as Rh-positive, it was tested again and found to be Rh-negative. She received multiple transfusions of Rh-negative blood, and eventually recovered.

This serious error resulted from the fact that in 1947 and 1948 our technician was using anti-CD serum for Rh typing. Since this we have found that many other patients who were listed as Rh-positive are really Rh-negative to anti-D serum. If only the anti-D serum is used in testing patients, such a mistake will not occur.

### Case 3

This patient, who had received a transfusion of 500 cc. of Rh-positive blood in 1941, showed blocking antibodies in the blood at the seventh month of her first pregnancy. The infant, however, showed only slight anemia which required no treatment. The husband was tested and found to be homozygous in respect to the Rh factor.

During her second pregnancy, the patient's blood showed blocking antibodies in a titer of 1:4. The infant was born with severe cyanosis, jaundice, and enlargement of the liver and spleen. The Coombs test was positive. An exchange transfusion was done, but the infant expired at the termination of the procedure, which took one and a half hours.

It would seem that this woman, who received a transfusion of Rh-positive blood before marriage, is fortunate to have one normal living child. Any future pregnancy will almost certainly result in another affected infant.

### Case 4

This woman, the mother of 4 living children, had received a transfusion ten years ago. During the seventh month of her sixth pregnancy, blocking antibodies in a titer of 1:64 appeared in the blood. At birth the infant was jaundiced and cyanotic, and had purpuric blotches over the skin. The liver and spleen were greatly enlarged. The hemoglobin was 6 Gm., and the blood showed 642 abnormal forms (per 1,000 red blood cells). The Coombs test was strongly positive. A replacement transfusion was done one and a half hours after delivery, but the infant expired after receiving about 400 cc. of Rh-negative blood.

The supposed father had been tested and found to be Rh-negative. After delivery of the infant, however, he came to me and told me that he was not the father. It would seem that the father of this child was Rh-positive, and that the patient had been previously sensitized by a transfusion of Rh-positive blood.

### Case 5

Although this Rh-negative patient had had two previous pregnancies, no antibodies were noted at the seventh month of her third pregnancy. At birth, however, the infant showed slight cyanosis, jaundice, and enlargement of the spleen. A blood count at delivery showed 16 Gm. of hemoglobin, 4,380,000 red blood cells, and 40 per cent normoblasts. After delivery the mother's blood showed antibodies in a titer of 1:64.

### Case 6

In 1945, during her second pregnancy, this patient received an intramuscular injection of blood from her husband because of nausea and vomiting. The infant was jaundiced and required several transfusions before recovery. During her third pregnancy the patient's blood showed blocking antibodies in a titer of 1:64 at the seventh month. The infant, delivered at term, was perfectly normal, however. The Coombs test was negative, and no jaundice or anemia was present. Several weeks later, however, mild anemia did develop, which responded to medication. The husband and all the children are Rh-positive.

In cases such as this, the infant should be followed carefully, for anemia severe enough to require a transfusion may develop several weeks after birth. This case demonstrates again that the antibody titer is not a reliable index to the severity of erythroblastosis.

### Conclusion

Although the incidence of erythroblastosis fetalis is low in comparison to the number of matings between Rh-negative women and Rh-positive men, this condition is responsible for too many infant deaths. The following precautions, if followed universally, would help reduce the mortality from this disease:

1. Rh-typing of all female recipients of blood, whether given by transfusion or intramuscular injections, and of all blood donors, in order to avoid the possibility of sensitizing an Rh-negative woman by giving her Rh-positive blood.

2. Rh-typing of all pregnant women.

3. Testing for anti-Rh agglutinins in the blood of Rh-negative women during the seventh or eighth month of pregnancy, particularly if the woman has had a previous pregnancy or blood transfusion.

4. Having Rh-negative blood available at all times, and giving immediate transfusions to erythroblastotic infants. During this phase close teamwork between the Obstetrician and Pediatrician is required.

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### The Evolutionary Process

For a complete understanding of the modus operandi of the endocrine system as it exists in man and his nearer relatives in the animal scale, I have long believed that more knowledge of the evolutionary process is needed. From what primitive form did it evolve? . . . As the struggle for survival has driven organisms into ever tougher environments, such superstructures as nervous and endocrine systems have of necessity been evolved in order to increase efficiency to the point where such environments can successfully be mastered.—Means, J. H.: The Integrative Action of the Endocrine System, *Ann. Int. Med.* 34:1315 (June) 1951.



## A NEW INTRAVENOUS BARBITURATE IN OBSTETRICS

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The search for the perfect obstetric anesthesia is as continuous as it is old. To complete it successfully, we must locate an agent which relieves both fear and pain on the maternal side, and at the same time operates with perfect safety for mother and infant. Although recent years have marked tremendous strides in the field of obstetric anesthesia, we have as yet failed to discover an agent which meets all these qualifications.

Intravenous anesthesia has the recognized advantage of easy administration over the various forms of anesthesia by nerve block in vogue today. The promise of rapid induction and complete unconsciousness also does much to allay the fears of the apprehensive mother who frequently doubts that the promised relief of the spinal needle will prove adequate. There is in the minds of most lay people, moreover, a deep-seated dread of any form of spinal injection. Its facility of administration also gives intravenous anesthesia an advantage over most forms of inhalation anesthesia, with the added recommendation that subsequent nausea is noticeably lessened. The obvious disadvantage is that, once it has been administered, the agent is ir retrievable.

In non-teaching hospitals such as we have in Greensboro, where interns are not available and specialized nursing is at a premium, anesthesia must be simple—that is, easily administered—and must carry with it a large safety factor for both mother and infant.

During the past few years the authors have attempted to evaluate several of the commercial barbiturates available for intravenous use. One of us has reported on the clinical use of Vinbarbital Sodium<sup>(1)</sup>. This drug was discontinued because of its prolonged and frequently unpredictable reaction period.

Early in 1942, at the suggestion of a friend\*, we began the use of Nembutal† (pentobarbital sodium). Although this product has been used as a basal anesthetic

for the control of convulsions, in eclampsia, in labor, and in neuropsychiatry, we have thus far failed to find in the literature references to its use as an anesthetic in obstetrics.

### *Method and Material*

Beginning in May, 1948, we attempted to use intravenous Nembutal routinely as an anesthetic for deliveries. Although the method has been used for more than 1000 deliveries in Greensboro, this report will be confined to the first 400 patients in our own private practice. Our customary procedure of administering Demerol, scopolamine, or both as often as necessary during the first stage was followed almost routinely.

In this series there were 248 multigravidas (62 per cent) and 152 primigravidas (38 per cent). Ages ranged from 16 to 41, the average being 25.4 years.

In the total series we used 2,969 cc. of Nembutal, making an average of 7.42 cc. per patient. The smallest dose was 3 cc. and the largest 13 cc. The dose was administered on an average of about 13 minutes prior to delivery, the shortest interval being one minute and the longest seventy minutes.

### *Results*

#### *Length of labor and types of delivery*

The length of labor in the 400 cases varied from forty minutes to forty hours and twenty minutes and averaged 7.87 hours. In 262 (62.5 per cent) of the cases, delivery was by low forceps, in 21 (5.2 per cent) by mid-forceps, and in 22 (5.5 per cent) by the breech. This leaves 95 cases (23.8 per cent) in which delivery was spontaneous.

Episiotomy was done in 263 or 65.8 per cent of the cases.

#### *Blood loss*

Blood loss, though not measured, was estimated as being small, moderate or excessive. The blood loss was small in 139 (34.8 per cent) of the cases, moderate in 251 (62.8 per cent), and excessive (hemorrhage) in 10 (2.5 per cent). DeLee<sup>(2)</sup> considers a blood loss of less than 300 cc. during labor as average, while Lull and Hingson<sup>(3)</sup> state that in 79.1 per cent of the cases, the blood loss ranges from 0 to 250 cc. Our record of excessive loss of blood in 2.5 per cent of the cases compares with Lull's and Hingson's figure of 2.8 per cent in a series of 1000 cases.

#### *Recovery from the anesthetic*

The shortest recovery period was twenty-

Read before the North Carolina Obstetrical and Gynecological Society, Southern Pines, April 22, 1951.

\*Dr. W. E. Bagant of Washington, D. C.

†Produced by Abbott.

two minutes and the longest 266 minutes, making an average of 136. The patient who required 266 minutes for recovery had received only 5 cc. of Nembutal; however, she was an epileptic who, unknown to us, had been taking several bottles of elixir of triple bromides every day. She was so dull most of the time that we judged her to be below average mentally. The patient with a recovery period of only twenty-two minutes had received 11 cc. of Nembutal seven minutes before delivery. The patient receiving the largest amount (13 grains) had a recovery time of 165 minutes — 29 minutes longer than the over-all average. The patient who received only 3 grains recovered in 120 minutes, or 16 minutes less than average. One hundred and twenty-eight (32 per cent) of the patients who received 8 cc. or more of Nembutal recovered in less than the average time of 136 minutes.

#### *Morbidity*

Six or 1.5 per cent of the mothers were morbid according to the criterion set up by the Joint Committee on Maternal Welfare.

#### *Infant birth weight*

Birth weights ranged from 10 pounds, 12 ounces to 1 pound, 1 ounce, averaging 7.04 pounds. Seven sets of twins were born (a percentage of 1.75), raising the total number of deliveries to 407. The smallest pair had a combined weight of 4 pounds, 14 ounces and the largest a combined weight of 14 pounds.

#### *Infant mortality*

Death of the infant occurred in 14 cases. The causes of death were classified as follows:

Prematurity .....	5
Macerated stillborn .....	4
Congenital anomalies of the heart and great vessels .....	2
Prolapse of the cord before ad- mission .....	1
Atelectasis .....	1
Unknown .....	1

The smallest premature infant to die weighed 1 pound, 1 ounce and the largest 4 pounds, 4 ounces. The mother of this 4 pound, 4 ounce infant had a severe toxemia, and was delivered in the thirty-fifth week of pregnancy.

The total infant mortality was 3.5 per cent, the corrected fetal mortality 0.5 per cent.

Table 1

#### Pertinent Data on the Use of Nembutal in 400 Private Obstetric Cases

Total Cases .....	400
Multigravidas .....	248 (62%)
Primigravidas .....	152 (38%)
Average Age .....	25.4 years
Average dose of Nembutal .....	7.42 cc.
Average time of administration .....	13 minutes before delivery
Average length of labor .....	7.87 hours
Low forceps .....	262 (65%)
Mid forceps .....	21 (5.2%)
Breech .....	22 (5.5%)
Spontaneous .....	95 (23.8%)
Episiotomy .....	263 (65.8%)
Blood Loss .....	
Small .....	139 (34.75%)
Moderate .....	251 (62.75%)
Excessive .....	10 (65.8%)
Average recovery time .....	136 minutes
Morbidity .....	6 (1.5%)
Average birth weight .....	7.04 pounds
Infant mortality .....	3.5%
Corrected infant mortality .....	0.5%
Resuscitation rate .....	5.0%

#### *Effect on infant*

Twenty of the newborn, 5 per cent of the total, required resuscitation. This record compares favorably with the resuscitation rate for leading hospitals, which is 4 per cent for all types of deliveries, under all types of anesthetics. Of the 20 infants, 17 or 2 per cent required only mild resuscitation, and 2 required only moderate measures. Anxious and prolonged efforts to bring about normal respiration were required in only 1 case (0.2 per cent).

A summary of the data is given in table 1. While these figures were taken from hospital records, we believe some to be in error. For instance, the total length of labor was not always recorded accurately, but was in some cases calculated from the time of the patient's hospital entry. Also, though every attempt was made to record any efforts at resuscitation, we believe that the incidence may have been slightly higher than these figures show. Moreover, reaction or recovery time is doubtless shorter than given here, since a great many patients awakened some time before their reaction was recorded by the attendants.

#### *Summary and Conclusions*

We have presented pertinent data regarding 400 deliveries under intravenous pentobarbital anesthesia. We have not been able to detect any appreciable difference in the length of labor, morbidity, or infant mortality between this agent and other anesthetics in general use.



Pentobarbital offers a rapid form of anesthesia with an adequate margin of safety for both mother and infant. Maternal blood loss and infant welfare are apparently unaffected. While not the perfect anesthesia, pentobarbital is a definite addition to the obstetrician's store of anesthetic agents.

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## CONGENITAL ANOMALY OF THE UTERUS AS A CAUSE OF ABDOMINAL PREGNANCY

### A Case Report

PAUL E. SIMPSON, M.D., F.A.C.S.

RALEIGH

In May, 1949<sup>(1)</sup>, I reported a case of abdominal pregnancy with multiple complications. The fetus lived for seven days, and the mother had at least three catastrophic episodes of hemorrhage and pulmonary embolism before she was discharged on her forty-fourth hospital day.

As is customary, the placenta was not disturbed at the time of celiotomy, but, as is not usual, this placenta was not absorbed. Palpation of a pelvic mass during the frequent pelvic examinations in 1948 made us suspect its continued presence.

### Removal of Placenta

In October, 1948, approximately one year after the celiotomy for abdominal pregnancy, it was decided to remove the unabsorbed placenta. Since the mass was in the pelvis, it was felt that the placenta had become detached from its abdominal implantation, and gravitated to the lower right side of the pelvis.

### Course in the hospital

After suitable preparation, the patient was taken to the operating room on October 22, 1948. The abdomen was entered by excision of the previous abdominal scar, and a large tumor made up of two ovoid masses measuring approximately 12 by 11 by 8 cm. and

4 by 3 by 3 cm., respectively, was found attached to the lower anterior abdominal wall, bowel, and mesentery. By tedious dissection, the larger mass was freed and delivered. Further exploration showed the smaller mass to be made up of more solid tissue, not unlike uterine musculature. Attached to the right side of this mass was a normal tube and ovary. No vaginal connection could be demonstrated, and it was decided that we were dealing with a very uncommon situation which would have to await the pathologist's help for diagnosis. This smaller mass was then removed, leaving the tube and ovary, which appeared to have good blood supply laterally. The original uterus, left tube, and left ovary were normal, and were not disturbed. The patient withstood the procedure well and recovered uneventfully. She was discharged on her seventh post-operative day.

### Pathologic report

At this point I wish to quote directly from the microscopic report.\*

"The smaller mass described grossly is covered on the outer surface by serosa, and the opposite surface, or that lining the small cavity or canal, is lined in part by endometrium. In the full thickness of this wall the structure is histologically that of myometrium, and within it there are prominent arteries and veins. On the outer surface there are some fibrous tabs and small blood vessels, with a relative increase in vascularity marking some sections of the subserosal tissue. The endometrium lining the inner surface includes some well differentiated glands and stroma. Most of these glands are lined by a single layer of epithelial cells, some of which show subnuclear vacuolizations as seen in the secretory phase. The stroma is variable in density, but includes some regions of deep congestion. This inner surface, however, is not continuous, but is interrupted by some areas in which there are partially hyalinized masses; there is frequently proliferation of connective tissue and phagocytic cells containing what apparently represents old blood pigment beneath or surrounding these hyalinized masses. In a few regions there are calcific deposits.

These hyalinized structures in general are acellular, although a few fairly large cells with pale nuclei are seen. These structures suggest masses of organized attached decidua tissue. Near the lower extremity of this mass of uterine tissue is also some dense fibrosis and what apparently represents repair or scar tissue. A few leucocytes are scattered throughout the myometrium, especially in some spaces surrounding blood vessels, and in areas adjacent to the hyalinized masses comprising a part of the inner or endometrial surface. Sections were taken through the larger mass, including the junction between the two structures and at other sites; near the junction of the two masses are bits of endometrial tissue and some smooth muscle tissue. Other sections, however, are represented essentially by dense, partially hyalinized fibrous tis-

Read before the North Carolina Obstetrical and Gynecological Society, Southern Pines, April 22, 1951.

\*Given by Dr. Thomas Wilson, pathologist at Rex Hospital.

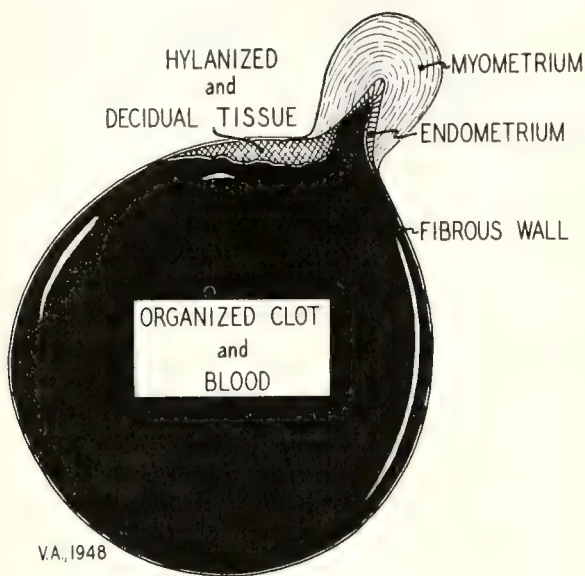


Figure 1

sue, while on the inner surface is some old blood pigment in the connective tissue, some partially degenerated blood, and some acellular fibrin-like material. No placental tissue is identifiable histologically in this mass, but the structure is interpreted as essentially an outer fibrous wall surrounding an organized mass including a partially organized and degenerated blood clot."

Figure 1 shows a reconstruction of the gross pathologic tissue.

#### Comment

From this report possibly the best explanation which can be found is that originally the fertilized ovum had been implanted in the right cornu of a bicornate uterus, and that the cornu had ruptured and become detached, leaving the left side of the uterus intact.

The viability of the detached cornu was established by the well preserved myometrium and the functioning endometrium. The fibrotic wall, or sac, comprising the larger mass previously described was attached to and completely surrounded the opening of the remnant of a uterine cavity, and anatomically was in a position to receive any bleeding or discharge from this cavity. What was believed to be the remnants of pieces of placental tissue still attached to the endometrial surface were recognized only in the smaller mass, but it appears likely that the fibrous wall of the larger mass may have resulted from organization about the placenta, which was left in the abdominal cavity at the time of the operation or delivery. Dif-

ferences in blood supply could account for the more complete disintegration of the portion of placenta contained within the larger mass.

Although this explanation of the findings in this patient is certainly open to question, it seemed to offer the best solution to the problem. One must call to mind the different types of congenital anomalies and realize that variations are possible. In this patient I believe that pregnancy occurred in a rudimentary right cornu. This cornu became detached, possibly through torsion, and the stage was set for subsequent developments. This patient had one vagina and one cervix, and unless there was a microscopic channel from the right cornu to the vagina, pregnancy could not have resulted except through the endometrial cavity of the left uterus.

#### Second Pregnancy and Confinement

On September 21, 1949, the patient, now para 2-0-1, was seen for a routine six months' check-up. Her examination was within normal limits. The pelvis was soft, with a normal sized uterus and normal left tube and ovary. She weighed 128 pounds. She was advised to lose 10 pounds and told that she might undertake another pregnancy. Her last menstrual period (five days normal) had begun September 5, 1949.

On November 30, 1949, she was given a complete examination and found to be about eight to ten weeks pregnant. It was noted at this time that the left side of the uterus was firmer than the right. The prenatal course was uneventful except for excessive weight gain. The fetus was in breech presentation.

On June 7, 1950, five days prior to her calculated date of confinement, the patient noticed the onset of bloody vaginal discharge and labor pains at 3:30 a.m. At 4:30 a.m., a few minutes after she was admitted to the hospital, the nurse found her sitting on the toilet; the umbilical cord had prolapsed and was easily seen protruding from the patient's vulva. She was immediately placed on the delivery table and examination showed a soft, dilatable cervix with a moving frank breech and a prolapsed cord which was pulsating rapidly and weakly. The breech was decomposed, and a small, living male infant was extracted. Both the mother and baby had uneventful postpartum courses.

Apparently, this patient is equal to any



complication. Despite all that has happened to her, she recently asked when she could again undertake another pregnancy. Since she and her husband are now permanent residents of Raleigh, I have advised strict contraception!

I wish to thank Dr. Thomas B. Wilson, pathologist at Rex Hospital, for his valuable time and help in reporting this case.

### Reference

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### Abstract of Discussion

Dr. Trogler Adkins (Durham): I have enjoyed Dr. Simpson's careful management and presentation of this unusual and most interesting case. It is more than possible that congenital anomalies of the internal genital system may account for a small percentage of abdominal pregnancies, even though from surveying the literature one gathers that the highest percentages are most likely the result of tubal abortion with implantation, and further development of the embryo. The careful reconstruction of the pathologic findings, both gross and microscopic, certainly tend to support Dr. Simpson's explanation as to the most likely development of the abdominal pregnancy in this case.

Review of the original article reveals that at the time of operation, the right tube and ovary were not identified and certainly were in no way connected with the uterus, left tube, and ovary, which were reported as normal. This is readily understandable, in view of the associated hazards in operations of this type. Assuming that this patient did harbor the fertilized ovum in early pregnancy in the right cornua and that by torsion or rupture the products were extruded into the abdominal cavity, it would certainly appear likely that the hemorrhage associated with the uterine rupture would give rise to the usual severe symptoms resulting from intra-abdominal bleeding. Also, one would expect a varying degree of vaginal bleeding; however, this patient was symptom-free until onset of the illness which ultimately led to the operation.

The management of the placenta at the time of operation varies considerably; in general, however, most authors agree that the placenta should remain undisturbed unless the fetus has been dead from two to four months.

In conclusion, I wish to thank Dr. Simpson for the privilege of discussing this paper, and to endorse heartily his rigid contraceptive program outlined for this particular patient.

**Medical Ethics.** In general our ethical rules deal with the relationship of members of the profession toward individuals of the public and with the responsibility of the physician toward the state. Medical etiquette is concerned primarily with relations of members of the profession with one another. Medical economics has to do with the material aspects of practice. "Medical economics has always rested fundamentally on medical ethics." The primary objective in all of these is to promote the welfare of humanity.—Bethea, O. W.: *Medical Ethics*, The Mississippi Doctor 28: 371, 1951.

## GOUT IN YOUNG PEOPLE

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and

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CHARLOTTE

The traditional pyknic, jolly old man who indulges in the pleasures of eating, drinking, and merrymaking is not the only sufferer from gouty arthritis. Since the average age of onset is 40 years, the occurrence of gout is often overlooked in early life. The attacks may be infrequent, with complete abeyance between exacerbations, and the disease may, in fact, remain dormant and asymptomatic throughout life. Hyperuricemia may be the only sign. Before the appearance of detectable urate deposits, the entity should be referred to as pre-tophaceous gout. The disease may be of several years duration before tophi can be demonstrated.

The incidence of gout during early years is not known, but some gouty patients will, on careful questioning, date their symptoms back to teen age. Bernstein<sup>(1)</sup> recently presented detailed accounts of four juvenile cases.

### Etiology

In gout there is a derangement in the breakdown of nucleoprotein and purine metabolism. Apparently this defect is congenital. Recent observations indicate that the derangement may be due to abnormal or insufficient pituitary-adrenal response to stress.

One can only speculate as to the cause of hyperuricemia. There may be increased formation, diminished excretion, or decreased utilization of uric acid. An increased formation may be associated with hepatic dysfunction, since uric acid is mainly formed in the liver.

Mild hyperuricemia without manifestation of gout is present in leukemia, polycythemia, and hemolytic anemia.

### Symptoms and Diagnosis

Pain in the first metatarsophalangeal joint has long been recognized as a manifestation of gout. The joints most commonly involved are, in order of frequency, the foot, hand, knee, elbow, shoulder, and hip. Joint involvement may be single or multiple. The swell-

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\*National Foundation for Infantile Paralysis: Fellow in Orthopaedic Surgery.



Fig. 1. Roentgenogram showing a cystic lesion in the proximal phalanx of the great toe.



Fig. 2. Roentgenogram showing similar involvement in the other foot.

ing, tenderness, and redness present over a gouty joint suggest inflammation. Complete remission following an acute attack is the rule, although repeated episodes may be expected.

Emotional upsets, an operation, alcoholic excess, trauma, undue exercise, or physical exertion may initiate an episode of symptomatic gout. Spring is a favorite season for attacks, and allergic phenomena are frequently noted in gouty individuals.

During an attack the blood uric acid is usually over 6 mg. per 100 cc., but it may be within normal limits (2 to 4 mg.). There is no correlation between the uric acid content and the clinical severity of the attack. An increased sedimentation rate is noted during the acute period.

Tophi prove the presence of gout, but are infrequent in the younger individual. Urate crystals are deposited in or on the joint capsule, cartilage, bursa, ligaments, and tendinous structures, resulting in a foreign body response. These deposits are often noted

on the fibrocartilage of the external ears. Destruction or replacement of bone takes place, together with overgrowth of bone, as in hypertrophic arthritis. A pannus forms around the joint, simulating atrophic arthritis.

Histologic studies are not helpful in the diagnosis other than to demonstrate the presence of sodium biurate crystals. Since formalin dissolves these crystals, the tissue from the tophus must be placed in absolute alcohol in order to preserve them. The murexide test may be used chemically to detect uric acid. This simple test consists of adding a few drops of nitric acid to the substance from the tophus, allowing it to dry, and then adding a few drops of ammonium hydroxide. This will produce a purple color if urates are present.

Roentgen studies of the involved joints may show no abnormality. The typical changes most likely to be noted are eroded or punched out cystic areas near joints. From the roentgenographic findings one must dif-



ferentiate atrophic and hypertrophic arthritis, bone cysts, enchondromas, Boeck's sarcoid, and hyperparathyroidism.

Urinary complications are infrequent in early life except for urate ureteral calculi. Chronic nephritis due to gout is a complication later in life.

### *Treatment*

Gout is a metabolic disorder for which we have no cure but for which we do have methods of control. Colchicine is specific for gout, and a therapeutic trial to establish the diagnosis is often indicated. The dosage is 0.5 to 0.6 mg. (1/120 to 1/100 grain) every two hours two days per week, unless diarrhea occurs. A prophylactic dose of 0.5 mg. (1/120 grain) given three times a day three days each week is of value in preventing recurrent attacks.

Salicylates are useful because of the analgesic effect and also because they increase the excretion of uric acid.

There is some evidence that dietary restriction makes no difference in the course of the disease. A reasonably low purine diet, omitting fishes, liver, and concentrated extracts of meat, does seem of merit. Avoidance of emotional upheavals, alcohol and food excesses, fatigue, strenuous sports, and hard physical labor is recommended.

Cortisone or adrenocorticotrophic hormone usually brings prompt relief of pain during a severe attack. Complete relief is the rule after one or two 100 mg. doses of Cortisone. Colchicine can then be used to keep the patient asymptomatic.

### *Illustrative Case Reports*

#### *Case 1*

A 15 year old boy complained of pain in the right great toe following participation in a high school football game. The first metatarsophalangeal joint was swollen and tender. On admission the blood uric acid was found to be 10.8 mg. per 100 cc. A roentgenogram showed a cystic lesion in the proximal phalanx of the great toe (fig. 1). A similar involvement was noted in the other foot (fig. 2). At operation chalky gray deposits were seen replacing bone, and the microscopic examination disclosed numerous urate crystals (fig. 3). This boy responded well to surgical curettage and is now asymptomatic on a prophylactic regimen.

#### *Case 2*

A 26 year old man was seen recently because of pain, swelling and redness over the dorsum and first metatarsophalangeal joint of the right foot. While in the Navy some five years previously, he

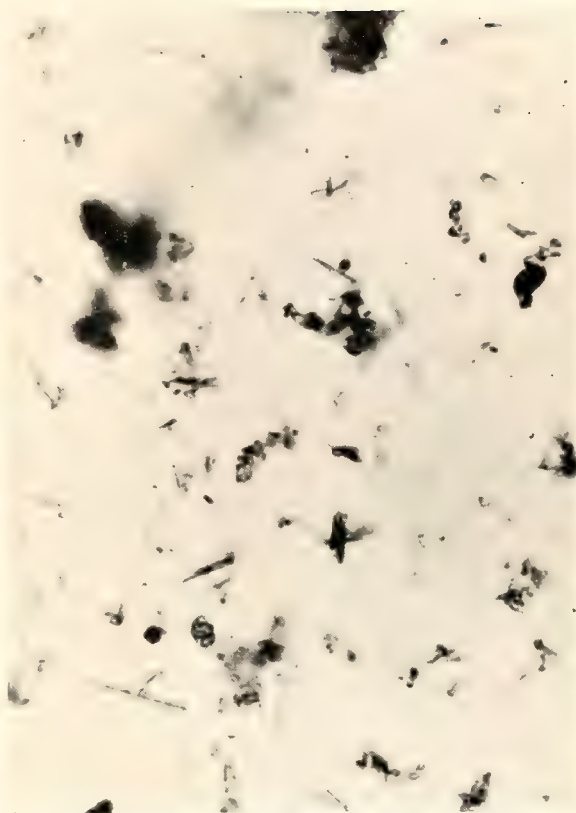


Fig. 3. Photomicrograph showing presence of urate crystals.

had had a similar episode which subsided on bed rest and two weeks of penicillin therapy. Penicillin and hot soaks were given again, but after five days no improvement was observed. Colchicine was then started. After twenty-four hours the foot was free of symptoms. The blood uric acid was found to be 5.5 mg. per 100 cc., but because of the dramatic improvement effected by colchicine therapy a presumptive diagnosis of gout was made.

#### *Case 3*

A 25 year old man was seen in 1948 with pain in his ankles and right wrist. Recently he was observed again because of pain in the wrist. During this interval tophi had developed in one ear. On careful questioning he dated his intermittent episodes of arthralgia at ten years previously.

### *Summary*

Gout is an age-old subject, but it can occur earlier in life than generally realized. Colchicine may be used to establish a presumptive diagnosis of gout.

### *References*

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2. Suttentfield, F. D.: Early Diagnosis and Management of Gout, Geriatrics 4:96-99 (March-April) 1951.

## AUREOMYCIN AND ITS USE IN THE TREATMENT OF CHRONIC OSTEOMYELITIS\*

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and

HERMAN A. GAILEY, M.D.†

DURHAM

This study was initiated in order to determine the efficacy of aureomycin in the treatment of chronic osteomyelitis.

### *Material and Method*

The drug was administered orally to 26 patients with chronic bone disease due to pyogenic organisms. Sulfonamides or antibiotics had been administered to all patients previously, and surgical procedures had been done on all of the patients.

Any patient who had an active recurrence of this bone disease was qualified for treatment. Bacterial cultures were taken, organisms were isolated, and antibiotic sensitivity tests were done.

Observation for a minimum of one year was required in all cases included in the survey. Fifteen patients were adequately followed for one year. Eleven other patients who were treated were not included in the results.

The patients were classified into four categories:

1. Those with chronic osteomyelitis for which adequate surgery was not possible (4).

2. Those with chronic osteomyelitis in which surgery was possible and antibiotic therapy was used as an adjunct (7).

3. Those with chronic osteomyelitis requiring amputation. Antibiotic therapy was used before and after surgery to control infection in the stump (4).

4. Those with chronic osteomyelitis who have not been followed for the required length of time, who did not receive adequate therapy, or who refused follow-up (11).

### *Dosage*

The initial quantity of aureomycin recommended was 4 Gm. daily. This dosage was gradually reduced to 25 mg. per kilogram of body weight, which usually indicated a total

of 1 to 2 Gm. each day. Side reactions, particularly nausea, were diminished with the smaller dose, and the effectiveness of the drug was not lost.

The duration of treatment with aureomycin varied, depending on the patient's condition and response to therapy and on the progress of each. Some patients received the drug for only one week, and others for as long as eight weeks.

### *Results*

#### *Group I. Chronic osteomyelitis for which adequate surgery was not possible (4 patients)*

The best result in this group was obtained in a 28 year old white male college student who had chronic osteomyelitis of the sacrum and pelvis, with several external sinuses (fig. 1). Penicillin, streptomycin, and sulfonamides had no effect on the drainage, which had been continuous for one year. Aureomycin therapy was started, and the exudate was stopped for several weeks at a time on three different occasions. In two or three periods of recurrence the early administration of aureomycin stopped the drainage after a few hours. The patient was asymptomatic until three months ago. Drainage started again, and aureomycin failed to control the recurrence.

Another patient in this group had tuberculosis of the shoulder, with a severe purulent exudate due to secondary pyogenic organisms. The pyogenic infection was not affected by aureomycin, the tubercle bacillus was not affected by streptomycin, and the patient died eventually from miliary tuberculosis.

The third patient had chronic osteomyelitis of the coracoid process and body of the scapula. There were no definite sequestra. Excision of the sinus tract was done, and penicillin was used. The exudate did not stop until aureomycin was given. There has been no drainage for nine months.

The fourth patient was a 70 year old male with chronic osteomyelitis of the tibia, as well as stasis dermatitis and moderate circulatory impairment. He was in severe pain. Aureomycin was given, the pain was relieved, and the cellulitis cleared. The drainage diminished. Other local and supportive meas-

\*Aureomycin supplied by Lederle Laboratories.

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Fig. 1. Radiopaque material injected into sinus on lateral aspect of trochanter of femur migrated to the anterior aspect of the sacrum. This is the main focus of chronic osteomyelitis. Aureomycin has reduced the frequency and quantity of purulent exudate. A mixed infection is present, and the majority of the organisms are sensitive to aureomycin but to no other antibiotic. Because of the extensive involvement in the sacrum and pelvis bones, this case is considered inoperable.

ures were necessary in order to postpone amputation. Three courses of aureomycin have aided in controlling the infection and pain, and have delayed the amputation indefinitely.

*Group II. Patients with chronic osteomyelitis treated by surgery with aureomycin as an adjunct (7 patients)*

All the patients in this group had been given penicillin previously, and all had been treated surgically. No definite conclusions can be drawn from this small group, since the operations alone may have been sufficient to control the infection temporarily.

Three of the patients had a recurrence of the infection about six months following operation. These episodes were controlled with aureomycin, whereas penicillin on previous occasions had not stopped the drainage.

Drainage from the bone ceased in one patient prior to application of a full thickness skin flap over a chronic bone infection. In

the others, although the infection recurred, aureomycin did diminish the exudate.

Cellulitis in a patient with osteomyelitis of the tibia who had been treated by saucerization and a pedicle skin flap, was controlled nine months after the procedure by 1 Gm. of aureomycin given daily for five days in doses of 250 mg.

*Group III. Patients with chronic osteomyelitis requiring amputation (4 patients)*

Three of the patients in this group were treated by amputation plus aureomycin before and after the operation. Healing by secondary intention occurred in all cases. Sensitivity tests, however, did not favor one antibiotic over the other, or a combination of the two.

The fourth patient had a chronic infection due to hemolytic *Micrococcus aureus*. Neither penicillin, given pre- and post-operatively over a long period, nor streptomycin, given for a short time, were able to control the organism and allow healing. A course of aureomycin was started, and healing occurred within six weeks.

*Group IV. Patients with chronic osteomyelitis who have not been followed for a long enough time, who have not received adequate therapy, or who have refused follow-up visits (11 patients)*

Bacteriologic studies in this entire group of patients indicated that mixed infection was present in over 50 per cent of the cases. This fact made sensitivity tests less reliable, and the formation of conclusions following treatment more difficult. From the results in this small series, it is believed that the sensitivity tests are a satisfactory guide to the specific antibiotic or combination of antibiotics to be used.

*Side effects*

The side effects following the administration of aureomycin to 26 patients were not severe. In 4 patients, moderate nausea following each dose of 0.5 Gm. was alleviated when two soda crackers were taken with the drug.

Anorexia in one patient was improved when the larger dose of 1 Gm. four times daily was reduced to 250 mg. four times daily.

Photophobia occurred in one patient while she was taking aureomycin. The drug was stopped for twenty-four hours, and the photophobia ceased. When the drug was re-

sumed, photophobia recurred, only to stop when the aureomycin was again discontinued.

### Conclusions

1. Aureomycin can be used in the treatment of inoperable chronic osteomyelitis as a means of controlling recurrent episodes of drainage. It is not known how long the drug will be effective against organisms that are already resistant to penicillin and streptomycin.

2. Bacterial sensitivity tests should be used when possible to determine the antibiotic of choice. In general the tests are reliable. A mixed infection, however, makes the test more difficult to perform, and less valuable.

3. Aureomycin should be used as an adjunct in the surgical treatment of chronic osteomyelitis, particularly where other antibiotics have already been tried and have become ineffective.

4. In this study, pyogenic infection in 11 out of 15 patients responded to aureomycin, at least temporarily, when the other antibiotics had lost their effectiveness. Seven of these 11 patients also received surgical treatment.

5. It is not known how long the offending organisms in these cases will remain sensitive to aureomycin.

**Medical Research.**—We ought first to note the rapid spread—thinking of Harvey, we ought to call it a revival, perhaps—of the belief that a direct study of the disease in the human patient can partake of the nature of a genuinely scientific research. It may be purely observational, it may be experimental in its method; but, in either case, it is ready now to accept the controls and submit to the discipline of the scientific method, and no longer seeks escape from these on a plea that medicine is, and, by implication, can be content to remain, an empirical art and not a science.—Sir Henry Dale: *Scientific Method in Medical Research*, British Medical Journal, November 25, 1950, page 1187.

**Problem Cases.** As a young pharmacist I often observed that many physicians tried to avoid taking patients who were hard to handle, or they tried to get rid of such individuals at the earliest opportunity. When I stepped out of the station in the city where I was to study medicine, I saw across the street a large sign for Pickwick Clothing. Their slogan was "We fit the hard to fit." It occurred to me that here was a firm that had made an immense success by not only catering to but actually inviting the problem individuals in their field. It not only suggested to me the advantage of being a "Pickwick Doctor" but has largely influenced some of my attitudes since that time. Whenever I have failed to make good with a problem case, I have felt a distinct sense of personal failure.—Bethea, O. W.: *Medical Ethics*, *The Mississippi Doctor*, 28: 372, 1951.

## HAS MALARIA DISAPPEARED?

C. P. STEVICK, M.D., M.P.H.\*

RALEIGH

Mortality data regarding malaria in North Carolina first became available in 1914. The number of deaths attributed to this cause each year since that date is shown in table 1. It will be noted that 1948 was the first year in which no deaths from malaria were officially recorded. The physicians reporting the two deaths in 1949 both stated that the diagnoses were made by exclusion, without definite laboratory confirmation. No malaria cases were reported in the vicinity of the residences of these two individuals. The 1950 death was reported as being due to cardiac failure with a questionable past history of malaria. There was no laboratory confirmation.

Table 1

North Carolina Malaria Deaths, 1914-1950  
(1916-1938 by place of occurrence; 1938-1950  
by place of residence)

Year	No. Deaths	Rate per 100,000 Population	Year	No. Deaths	Rate per 100,000 Population
1914	253	10.4	1933	51	1.5
1915	302	12.2	1934	66	2.0
1916	337	13.4	1935	91	2.7
1917	268	10.5	1936	150	4.4
1918	189	7.5	1937	87	2.5
1919	201	7.9	1938	70	2.0
1920	210	8.1	1939	53	1.5
1921	180	6.8	1940	60	1.7
1922	183	6.8	1941	28	0.8
1923	169	6.1	1942	33	0.9
1924	145	5.1	1943	22	0.6
1925	141	4.9	1944	25	0.7
1926	102	3.4	1945	24	0.7
1927	60	2.0	1946	8	0.2
1928	64	2.1	1947	2	0.1
1929	64	2.0	1948	0	0.
1930	47	1.5	1949	2*	—
1931	46	1.4	1950	1**	—
1932	53	1.6			

\*Diagnosis presumptive; no confirmatory laboratory data.

\*\*Death due to cardiac failure; malaria not confirmed by laboratory.

### Reduction in North Carolina Since 1938

Malaria was not made a reportable disease in this state until 1937. Cases reported since that date are shown in table 2. Data regarding both cases and deaths include infections among returning service men as well as endemic cases. No differentiation is made be-

\*Director, Division of Epidemiology, North Carolina State Board of Health.



tween primary infections and relapses. Only one case report for an individual in any one year is included.

Table 2  
Incidence of Malaria in North Carolina  
1938-1950

Year	No. Cases	Cases per 100,000 Population	Year	No. Cases	Cases per 100,000 Population
1937	876	25.5	1944	154	4.3
1938	636	18.3	1945	554	15.8
1939	629	17.8	1946	369	10.1
1940	629	17.6	1947	137	3.7
1941	237	6.5	1948	150	3.9
1942	248	6.8	1949	53	1.4
1943	183	5.0	1950	36	0.9

The 36 cases officially recorded in 1950 were reported in twelve counties. One county reported 20 of the cases, many of which were stated to be laboratory diagnoses. Several unofficial verbal reports of cases which were also based on laboratory examination of blood smears were received from another county. Permission was obtained from the laboratories concerned in the latter two counties for a visit by a malariologist in November, 1950, in order to review any slides on hand and to discuss the laboratory techniques being used.

No attempt to evaluate these laboratories was made, and no formal conclusions were drawn. During the visits, however, the malariologist found none of the slides still available in the laboratory to be positive for malaria.

#### Blood Smear Surveys

Blood smear surveys of school children and limited house-to-house surveys have been used by the malaria control unit of the State Board of Health since 1937 to identify high incidence areas. These data are presented in table 3. The last positive smears were obtained from Nash and Bertie counties in 1945.

Table 3  
North Carolina Malaria Blood Smear Surveys  
1937-1950

Year	County	No. Slides	No. Positive
1937	Bladen	256	67
	Edgecombe	4,629	179
	Robeson	4,932	103
Total		9,817	349

1938	Halifax	6,809	86
	Pitt	6,587	63
	Wayne	6,350	42
Total		19,746	191
1939	Beaufort	5,391	67
	Johnston	5,518	63
	Northampton	1,482	48
Total		12,391	178
1940	Harnett	4,006	3
	Northampton	2,259	1
	Tyrrell	824	4
	Washington	1,390	7
Total		8,479	15
1941	Craven	4,123	6
	Hyde	913	0
	Martin	3,799	45
Total		8,835	51
1942	Camden	500	0
	Carteret	2,029	0
	Chowan	772	1
	Craven	1,561	2
	Cumberland	1,935	2
	Granville	1,887	0
	Lenoir	1,235	1
	New Hanover	2,673	1
	Onslow	1,683	1
	Pasquotank	2,597	0
	Perquimans	863	0
	Robeson	476	2
	Union	1,651	3
	Vance	1,639	1
	Wayne	1,630	1
Total		23,131	15
1943	Bladen	375	1
	Camden	38	0
	Cumberland	520	1
	Edgecombe	571	3
	Halifax	212	0
	New Hanover	869	0
	Onslow	186	0
	Pasquotank	118	0
	Person	399	8
	Richmond	2,854	0
	Robeson	1,368	0
	Scotland	1,517	1
	Vance	400	0
	Warren	148	34
	Wayne	1,140	3
Total		10,715	51
1944	Person	303	5
Total		303	5
1945	Bertie	2,993	1
	Chowan	1,319	0
	Gates	1,143	0
	Hertford	2,058	0
	Nash	5,711	9
Total		13,224	10
1946	Columbus	6,692	0
	Greene	2,676	0
	Lenoir	4,022	0
Total		13,390	0

1947	Brunswick .....	3,032	0
	Pender .....	2,832	0
	<b>Total</b> .....	<b>5,864</b>	<b>0</b>
1948	Northampton .....	268	0
	Pitt .....	1,935	0
	<b>Total</b> .....	<b>2,203</b>	<b>0</b>
1949	Jones .....	1,711	0
	Sampson .....	1,165	0
	Vance .....	558	0
	Warren .....	118	0
	<b>Total</b> .....	<b>3,552</b>	<b>0</b>
1950	Halifax .....	1,438	0
	<b>Total</b> .....	<b>1,438</b>	<b>0</b>

Smears submitted to the State Laboratory of Hygiene by private physicians in 1949 and 1950 numbered 1,636. No positive smears were found in those two years. Table 4 presents the findings of this laboratory for the past ten years.

**Table 4**  
North Carolina State Laboratory of Hygiene  
Malaria Examinations

Year	Slides Examined	No. Positive
1941	1,178	7
1942	861	21
1943	779	10
1944	921	14
1945	1,146	19
1946	1,245	70
1947	1,075	32
1948	954	3
1949	987	0
1950	649	0

#### *Reduction in Other States*

All of the other states have also undergone a marked reduction in malaria, according to all available evidence<sup>(1)</sup>. Because of this situation, the National Malaria Society has established a "Committee on Criteria to Determine When Malaria Ceases to be an Endemic Disease." The committee's criterion is as follows: "Malaria may be assumed to be no longer endemic in any given area when no primary indigenous case has occurred there for three years, if reporting and case-finding are actively promoted and adequate investigations are carried out."<sup>(2)</sup> Recommendations of the committee include that all slides considered to be positive be submitted to a national depository for review. The Communicable Disease Center of the United States Public Health Service has been designated as the national depository.

#### *Conclusion*

From the evidence available, this state is rapidly approaching the criterion given above for malaria eradication. In the coming

months it is hoped that all physicians seeing patients suspected of having malaria will prepare blood smears for laboratory examination, and that any found to be positive will be forwarded to the State Board of Health for routing to the national depository for review.

It is possible that the question "Has Malaria Disappeared?" can soon be answered in the affirmative for North Carolina.

*Addendum:* Since the above article was submitted for publication, there has been reported for 1951 to date one North Carolina case of malaria stated to have been diagnosed by blood smear. The slide is not available for confirmation by another laboratory. In addition, there have been reports of twelve Korean veterans who have had malaria relapses after returning to this state. This problem has appeared simultaneously in other states. Unless malaria can be diagnosed and treated promptly in returning service men, the malaria hazard may be renewed in the entire southern part of the United States.

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1. Andrews, J. M., Quinby, G. E., and Langmuir, A. D.: Malaria Eradication in the United States, *Am. J. Pub. Health*, 40:1405-1411 (Nov.) 1950.
2. Summary of Deliberations of National Malaria Society Meeting, Washington, D. C., October 5, 1950.

DR. WILLIAM deBERNIERE MacNIDER

WILLIAM M. COPPRIDGE, M.D.

DURHAM

On May 31 the state was saddened by the news of the death of Dr. William deBerniere MacNider. Although for the past several years he had been in declining health, he was acutely ill for only a few days. At the time of his death, he was approaching his seventieth birthday.

Dr. MacNider was born in Chapel Hill and lived his entire life there. He was the grandson of Dr. William Peter Mallett, who practiced in Chapel Hill for many years. Graduating from the University in 1899, he received his M.D. degree from the University Medical School in Raleigh in 1903. While still a student himself, he began his teaching career in 1899 when he was appointed assistant in biology in the University. After postgraduate training at the University of Chicago

<sup>1</sup>Prepared at the request of the president of the Medical Society of the State of North Carolina.



and at Western Reserve University in Cleveland, he returned to become full professor of pharmacology and bacteriology in 1905.

No man in medicine in North Carolina ever received more honors, nor had his work more generally recognized, than did Dr. MacNider. He was probably the pioneer scientific medical research worker in the South. Since 1903, when his publications began to appear, he made over 175 contributions to medical literature during his career. His original work on various types of toxic renal injuries—probably his outstanding contribution—is accepted over the world as being the basis of much of our present understanding of renal disease. He was the organizer of the Society of Gerontology, and served as its first president. For several years he was consultant on gerontology of the National Institute of Health. In his later years many of his publications dealt with the pathologic processes of aging.

In 1924 he became the first Kenan Research Professor in the University, and he served as dean of the Medical School from 1937 to 1940. During this period the present medical building was constructed, largely through his efforts.

His interest in science and medicine resulted in his membership in twenty-nine organizations. He served, at some time, as president of nine of these groups, and was editor, or on the editorial boards, of four scientific journals. He was a member of the National Academy of Sciences, the American Philosophical Society, and the American Academy of Arts and Sciences. In all these organizations Dr. MacNider took an active interest, and was in regular attendance at their meetings. He was president of the Medical Society of the State of North Carolina in 1926.

With all his recognition and acclaim, Dr. MacNider maintained through the years his quiet modesty, his gentle kindness, and a sincere interest in his friends. The lowly folk of Chapel Hill had in him a close friend and adviser. Having practiced medicine in Chapel Hill for many years, he remained medical counselor to many of the older residents, both colored and white. No one ever consulted "Dr. Will" MacNider who did not receive a sympathetic hearing and kindly advice.

In medicine in North Carolina, Dr. MacNider was best known as a teacher of pharmacology. For almost fifty years he taught

the action of drugs to hundreds of students, most of whom are now practicing in the state. His students knew him as a sincere and talented teacher who showed unusual interest in their progress. He loved his work in the classroom and laboratory, and could be found there at almost any hour, preparing for his teaching duties.

Many institutions over the United States sought his services. He always declined to leave Chapel Hill, regardless of how attractive the offered position might be. When, in 1936, the two year medical schools in the state were threatened with closure, Dr. MacNider, in a hearing in Chicago, ably presented the case of these two schools. Both were saved—to be expanded into four year institutions. He strove for the expansion of the University school, and was unrelenting in his conviction that it should be carried out on the campus at Chapel Hill.

In 1918 Dr. MacNider was married to Miss Sallie Foard of Salisbury. His wife and a daughter, Miss Sallie Foard MacNider of Chapel Hill, survive him.

In Dr. MacNider's passing, the members of the Medical Society of the State of North Carolina have lost a most eminent colleague. Many in our Society feel the personal loss of a close and kind friend. The close of his versatile career as an able practitioner, a renowned medical investigator, and a distinguished teacher, brings the realization that this Society will probably never again know one whose life's work in medicine has been so widely and usefully reflected.

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**The Doctor as a Public Speaker:** One accomplishment which the prospective doctor should seek after, and which need not add to the burden of the curriculum, is the ability to speak in public—to give clear and succinct expression to his ideas in a company of his fellows. He will probably find it easiest to acquire this ability in a debating society or similar body, for it is more a matter of cultivation than of natural endowment. The level of public speaking in the medical profession is lower than in the professions of law and teaching and in the Church and the Civil Service.

The doctor, especially in a small community, will probably be called upon to take a lead in public affairs, which will bring him occasionally to the platform. He may also be expected to take a part in the meetings of his profession, and the ability to put his points so that they can be comprehended by the slower-witted and the partially deaf will be a recommendation. From time to time he will go into the witness-box, and in court a habit of clear statement will serve him well.—Editorial, Brit. M.J. 2:668 (Sept. 16) 1950.

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"The prime object of the medical profession is to render  
service to humanity; reward or financial gain is a subordinate  
consideration. Whoever chooses this profession assumes the  
obligation to conduct himself in accord with its ideals."—Prin-  
ciples of Medical Ethics of the American Medical Association,  
Chapter 1, Section 1.

SEPTEMBER, 1951

### PROFESSIONAL REMINDER

Some of our readers may have wondered why the first two sentences of the Principles of Medical Ethics of the American Medical Association have been appearing on the masthead of the NORTH CAROLINA MEDICAL JOURNAL since the June issue. The suggestion was made in a personal letter to the editor from one of Philadelphia's finest doctors of the old school, whom many generations of Jefferson students have loved and admired—Dr. John Beardsley. Even though few of our members need to be reminded of their professional obligations, it will not hurt any of us to have our memories refreshed regularly; and this monthly message should make every doctor take a little more pride in his chosen calling.

### PHYSICIANS' INCOMES

Much publicity has been given, both in the lay and the medical press, to the survey of physicians' incomes conducted jointly by the office of Business Economics of the United States Department of Commerce and the Bureau of Medical Economic Research of the American Medical Association. The first report of the survey was published in the July issue of the Department of Commerce's *Survey of Current Business*, and in the *Journal of the American Medical Association* for July 28.

No doubt this report has been seen by most readers of the NORTH CAROLINA MEDICAL JOURNAL, so it need not be given in detail. It shows that the net income—before taxes—of all civilian physicians, excluding interns, residents, fellows, medical school personnel, and physicians in the armed forces—in 1929 was \$5,304; in 1949, \$11,058.

Before becoming too excited over the fact that the 1949 net income is slightly more than double the 1929 figure, one should remember that the national income has been considerably more than doubled, that the increase in taxes has multiplied manifold, and that the dollar now is not worth more than half what it was ten years ago. It is doubtful if the "take home pay" is as much now as it was twenty years ago.

Another most important factor in physicians' incomes was not mentioned in the Department of Commerce report. It was barely suggested in the A. M. A.'s Bureau of Medical Economic Research discussion, as "the increased 'output per physician.'" This factor was made clear in the A. M. A.'s booklet, *A Doctor for You*. Because of improved transportation facilities, greater use of the physician's offices and hospitals, and improved equipment and technique, "A generation ago a physician spent only about 30 per cent of his working hours actually doctoring. Today a physician spends approximately 90 per cent of his (working) time." Obviously a patient gets more real service from his doctor now than was the case twenty years ago.

The U. S. Bureau of Labor Statistics estimates that, based on its mid-1951 survey, the cost of medical care (including drugs) was only 54.7 per cent above the 1935-39 average; food prices were up 126.8 per cent, and nearly all other costs of living were up



far more than medical care. In 1950, all physicians' fees were up only 44.7 per cent above the 1935-1939 level.

Evidently doctors are not the heartless profiteers that some of their critics picture them to be.

\* \* \*

### A BRITISH EVALUATION OF THE NATIONAL HEALTH SERVICE

The British National Health Service has been in operation for more than three years—since July, 1948. This is long enough to form an opinion of its merits and demerits. Dr. Lawrence Abel devoted his presidential address before the Metropolitan Counties Branch of the British Medical Association of July 10 to an evaluation of the NHS<sup>(1)</sup>. Dr. Abel contrasted the British Medical Association's plans for improving the nation's medical service with the plans of the politicians. The B.M.A., in 1930, said in "A General Medical Service for the Nation":

"The relations between doctor and patient are so intimate that both . . . resent any outside interference . . . There is no more reason why any third party should come between the patient and his medical adviser than between the individual and his spiritual adviser . . . Experience in other countries shows the danger of outside interference taking a political form . . . As many doctors as possible should be able to take part in hospital work."

"In 1936," states Dr. Abel, "The Hospital Policy of the Association' was published. It lays down as fundamental that there should be accommodation in all districts for the treatment of patients by general practitioners."

In contrast to the evolutionary process advocated by the profession, Dr. Abel states that "the politicians demanded a medical Utopia overnight. . . They promised the earth and cannot deliver it."

He then enumerated some points in which the "welfare state" philosophy has been incorporated in the planning of NHS. After promising "free" medical care for everyone, they estimated that the NHS would cost 200 million pounds a year. Instead, its cost last year was nearly 500 million pounds. Less than 10 per cent of this cost was met by the "contributions"; more than 90 per cent came from the general fund. The Minister of Health blames much of this increase in the estimated cost upon the cost of the medicines prescribed by the doctors, and proposes that they limit their prescriptions, so that they may have more income for themselves!

"A second principle of the welfare state is that those in authority do not trust anyone to spend his own money. They therefore collect all, or nearly all of it, and spend it for him. This takes away from the individual a very large proportion of responsibility for what he does for himself. It is even almost impossible for him—until it is too late—to find out how his money is being spent. So he has lost his freedom of action, and has become a veritable slave of the bureaucracy."

The third principle of the welfare state is the need for control. "I do not need to stress the hundred and one ways in which our lives—as well as our money—are today controlled. . . We have come under the control of inept experts, and are subject to remote authority."

Dr. Abel minces no words in showing that the NHS has failed to fulfill the promise that the people would get better medical care, since they would feel free to consult a doctor at the first evidence of illness. The time of the doctors has been so taken up by trivial complaints and by form-filling that they cannot give one individual proper attention. The NHS has failed to make good the promises that the doctors would not suffer financially, and offers the lame excuse that the cost of the medicines prescribed by the doctors is too great a drain upon the scheme. There is no longer the intimate relationship between doctor and patient, as medical practice is more and more under bureaucratic control, and the doctor's records open to public inspection. Dr. Abel believes that "a return of a sense of responsibility by the patient, and an increased responsibility by the doctors, are the master keys to the solution of many of our difficulties."

Dr. Abel closes his excellent address by quoting from Abraham Lincoln:

"You cannot bring about prosperity by discouraging thrift.

"You cannot strengthen the weak by weakening the strong.

"You cannot help the wage-earner by pulling down the wage-payer.

"You cannot further the brotherhood of man by encouraging class hatred.

"You cannot help the poor by destroying the rich.

"You cannot keep out of trouble by spending more than you earn.

"You cannot build character and courage by taking away men's initiative and independence.

"You cannot help men permanently by doing for them what they could and would do for themselves."

1. Supplement to the British Medical Journal, August 4, 1951

## MORAL VS. LEGAL OBLIGATIONS

The dismissal of ninety West Point cadets, including virtually the whole football squad, has underscored the tragic let-down in the ethics of those who should set an example for the youth of our land. Only too often has the lame excuse been offered by some public official, found guilty of questionable use of his influence and of accepting thinly disguised bribes, that he had done nothing not allowed by the law.

In striking contrast with this attitude of some of our present day officials is a story concerning Andrew Jackson. On the highway from Nashville to his old home, "The Hermitage," may be seen the magnificent Cloverbottom Farm. Those who know its history take pleasure in telling visitors that this farm once belonged to Andrew Jackson, but was lost on a bet made in a cockfight. Although Jackson was not legally bound to pay the debt, he recognized it as a moral obligation, and promptly deeded the farm to the owner of the victorious cock.

One does not have to condone gambling in order to credit Jackson with a far higher sense of honor than has been displayed by many of our public men now who apparently consider a legal obligation as far more important than a moral one.

\* \* \*

## CONSTRUCTIVE CRITICISM FROM ROBERT RUARK

One of North Carolina's native sons who has achieved quite a reputation as a writer is Robert C. Ruark, who was born in Wilmington and was graduated from the University of North Carolina. In his syndicated column he shows much of Will Rogers' ability to get to the heart of current events and trends, and to present his analysis in homely, everyday language. A recent column, "Diagnosis in Danger of Becoming a Lost Art," might well be "chewed and digested" by all medical men.

Mr. Ruark's theme was that doctors, in their enthusiasm for the antibiotics, are forgetting the art of diagnosis. "The assorted nostrums are generally so efficient that you really don't have to diagnose unless you take a serious, clinical interest in what might be wrong with the average customer."

Mr. Ruark made a few other observations

which are remarkably astute for a layman. The first is that the antibiotics may eventually lose their effectiveness, and should be reserved for emergencies. "I would rather fight off a common cold single-handed and hold the Sunday punch for pneumonia." His second observation—"Another danger of the too-often administered cure-all is that it can obscure symptoms"—might have been the text for the timely article by Dr. George Harrell in the NORTH CAROLINA MEDICAL JOURNAL. A third observation was based on his personal experience with an allergic reaction: "... in some people the remedy seems more drastic than the ill."

All that Mr. Ruark said about the dangers of the sulfonamides and antibiotics has been brought out repeatedly in recent medical literature; but it should underscore all that medical men have written on the subject to have an intelligent layman summarize all these objections in one column.

\* \* \*

## DR. OREN MOORE

The news that Dr. Oren Moore had passed away on August 29 was no surprise to his family and intimate friends, for only a short time before an operation disclosed that he had an inoperable lung cancer. His going is a fresh reminder of the old adage that "Death loves a shining mark." His familiar figure, with the inevitable red carnation in his button hole, will be sadly missed at medical meetings in the state and in the nation. He was president of the State Medical Society in 1946, and last year was president of the South Atlantic Association of Obstetricians and Gynecologists. For some years he had been on the Council of the American Association of Obstetricians, Gynecologists and Abdominal Surgeons.

His genial presence, his infectious smile, and his ready humor made him a general favorite with colleagues and patients alike. He was a Christian gentleman who lived and practiced his religion in his everyday life. The memory of his useful, full, and happy life will make his presence seem very near to his wife and children. His influence will be felt for many years to come in medical circles in North Carolina and the nation.



## Committees and Organizations

### COMMITTEE ON GRIEVANCES

By action of the House of Delegates in May, 1950, there was established a permanent Committee on Grievances to consist of the five immediately available past presidents of the Society.

This committee has the responsibility of receiving, considering, settling or referring to the Executive Council for disciplinary action, all complaints which may be offered against the membership, as a group or as individuals.

The State Board of Health has made to the Committee a complaint to the effect that: North Carolina physicians are exceedingly delinquent in filing death, birth and stillbirth certificates. The problem is so grave that in many counties over fifty per cent are filed more than two months late. This means that a corresponding number of dead bodies are buried without proof of natural death and in violation of the State Laws.

The undertakers have been treated with so little consideration and have been so delayed that many times they make no effort to secure death certificates.

Families have been greatly inconvenienced in making insurance claims, etc., and the profession has been the object of severe and justified lay criticism.

The matter is being brought forcibly to the attention of the members of the Medical Society of the State of North Carolina with the urgent suggestion that these certificates be completed in exact compliance with the law.

This Committee considers the matter of such gravity that it is recommending to the State Board of Health that future, persistent violations be prosecuted as provided by law. Heretofore, the State Board of Health has been very reluctant to appeal to the courts.

The need to fulfill professional obligations and the necessity of improving Public Relations prompt this committee to respectfully request the complete cooperation of all concerned.

Respectfully,

PAUL F. WHITAKER, M.D., Chairman  
OREN MOORE, M.D., Vice Chairman  
G. W. MURPHY, M.D., Secretary  
WILLIAM M. COPPRIDGE, M.D.  
JAMES F. ROBERTSON, M.D.

## CORRESPONDENCE

To the Editor:

The Veterans Administration has been in quite a quandary about the use of Cortisone and ACTH in the home care of veterans. After looking over their recommendations of information to be published relative to the use of these drugs, this Committee has evolved the following memorandum which we will appreciate having published in the earliest possible issue of the JOURNAL. I am enclosing the information.

J. H. MCNEILL, M. D., Chairman  
Committee on Services and Fees  
For Home Town Medical Care of  
Veterans.

\* \* \*

### CORTISONE ANNOUNCEMENT

1. The majority of service connected disabilities (wounds, TB, diabetes, psychoneuroses) do not need Cortisone or ACTH.
2. If Cortisone or ACTH become necessary because of an acute backset or failure of other therapy, the patient is probably sick enough for emergency admission to a VA hospital.
3. In order to follow out the studies suggested by the Veterans Administration, it would seem that the patient should be admitted to a VA Hospital as an emergency for trial of treatment and evaluation thereof.
4. This Committee RECOMMENDS:  
THAT, where need for Cortisone or ACTH seems to exist or is demanded by the patient, application should be filed on form 10-P-10 for non-emergency admission (for emergency admitting procedure see note below\*). Determination as to the use of Cortisone or ACTH will be made by the therapy board at the VA Hospital. There, proper laboratory follow-up would be more economical. The efficacy of the therapy could be determined. If beneficial, proper maintenance dose could be determined and administered at home under the Medical Society's VA Home Care Program.\*\*

\*Arrangements for admission to a VA Hospital in an emergency should be made directly by the private physician with the nearest VA Hospital. Such arrangements should also include transportation. If a veteran requires hospitalization, and cannot be safely transported to a VA Hospital, the doctor may call the Chief Medical Officer in Winston-Salem for determination of service connection and get verbal authorization for private hospitalization if the veteran is eligible. The VA is allowed to authorize admission to a private hospital only when travel would endanger the patient's health or life. If the veteran requires Cortisone, authorization and supply can be discussed at that time.

\*\*Cortisone can not be prescribed on the present set-up of the Home Care prescription program. If, however, maintenance doses have been determined at a VA Hospital, arrangements may be made to

secure the material from the VA Regional Office in Winston-Salem, North Carolina.

#### COMMITTEE ON SERVICES AND FEES FOR HOME TOWN MEDICAL CARE OF VETERANS

James H. McNeill, M.D., Chairman  
Eben Alexander, M.D.  
E. I. Bugg, M.D.  
E. McG. Hedgpeth, M.D.  
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## BULLETIN BOARD

### PRESIDENT'S MESSAGE

#### HIGHWAY COMMISSION SAFETY DIVISION TESTING PROGRAM

Elsewhere in the Bulletin Board you will find an interesting article on the subject of the State's Safety Vision program, which has been presented after considerable consultation, and which was initiated July 16, 1951. Through this program, the Highway Safety authorities are undertaking to educate the drivers of motor vehicles to the safety involved in good eyesight while driving on our highways. It behooves the medical profession to give sympathetic consideration to this educational effort.

It should be pointed out that the program involves a continuous research effort, on a long range basis, to discover what may be some of the factors contributing to the high rate of death, personal injury, and economic waste resulting from highway accidents. One may hope that the physicians in North Carolina will lend their hearty interest and cooperation to the Safety Division examiners and officials and to the public in the presentation of this program and in making it an effective effort toward improving safety rights upon our highways.

FREDERIC C. HUBBARD, M.D.

#### NEWS NOTES FROM THE DUKE UNIVERSITY SCHOOL OF MEDICINE

The Duke University School of Medicine and Duke Hospital announce the following series of autumn lectures, sponsored by the North Carolina Academy of General Practice. The series will take the place of the annual symposium that Duke has offered for a number of years.

##### Program

(All meetings held in Page Auditorium.  
Time: 10 a.m. to 12 noon.)

##### October 13

Presiding, Dr. V. H. Duckett, Canton  
"Cretinism, Mongolism, and Other Mental Deficiencies"—Dr. Clemens A. Benda, Clinical Director of the Walter E. Fernald State School, Waverly, Massachusetts.

"Ruptured Uterus"—Dr. Woodard D. Beacham, Clinical Professor of Obstetrics and Gynecology, Tulane University School of Medicine, New Orleans, Louisiana.

##### October 27

Presiding, Dr. Amos N. Johnson, Garland.  
(Subject to be announced.) Dr. A. McGee Harvey, Professor of Medicine, Johns Hopkins School of Medicine, Baltimore, Maryland.

"Medical Effects of the A-Bomb"—Dr. Herman E. Pearce, Professor of Surgery, University of Rochester, Rochester, New York.

##### November 10

Presiding, Dr. John R. Bender, Winston-Salem.  
"The Complications and Treatment of Pulmonary Cysts and Emphysematous Blebs and Bullae"—Dr. Isaac A. Bigger, Professor of Surgery, Medical College of Virginia, Richmond, Virginia.

"The Evaluation of Palpitation"—Dr. Tinsley Harrison, Professor of Medicine, Medical College of Alabama, Birmingham, Alabama.

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#### N. C. Premature Care Program Will Sponsor Teaching Program by Duke School of Nursing

Duke University will become North Carolina's first training center for premature infant care this fall, it has been announced. Public health nurses and graduate nurses in hospitals throughout the state will be trained in caring for premature babies at the Duke School of Nursing as part of the North Carolina Premature Care Program.

The state premature program, administered by the State Board of Health through the pediatric consultant, Dr. Robert J. Murphy, is sponsored by the North Carolina Pediatric Society. For two and one-half years it has sponsored six service (treatment) centers in North Carolina hospitals, but has had no facilities for training nurses.

The teaching at Duke is expected to begin early this fall in North Carolina, and may become a regional program later. Although only nurses will be trained at first, the plan may be expanded for training physicians later on.

Service centers are located at Duke and Watts Hospitals, Durham; Rex Hospital, Raleigh; Baptist Hospital, Winston-Salem; James Walker Hospital, Wilmington; and Victoria Hospital, Asheville.

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Dr. Charles H. Sawyer, professor of anatomy at the Duke University Medical School and a member of the Duke faculty since 1944, will become professor of anatomy at the new medical school of the University of California in Los Angeles. Dr. Sawyer will assume his new duties in Los Angeles at the beginning of the fall semester.

A member of the American Association of Anatomists, the American Society of Zoologists, and other top scientific and academic societies, Dr. Sawyer has been a member of the Duke anatomy research team investigating endocrine phenomena since he joined the staff.

#### NEWS NOTES FROM THE BOWMAN GRAY SCHOOL OF MEDICINE OF WAKE FOREST COLLEGE

Dr. C. C. Carpenter, Dean of the Bowman Gray School of Medicine of Wake Forest College, announces three additions to the faculty, effective July 1, 1951:

Dr. Robert Williams Pritchard assumed his duties as instructor in pathology and director of hematology and the blood bank. Dr. Pritchard is a graduate of George Washington University School of Medicine, and received his pathology training at Children's Hospital and Deaconess Hospital, Boston; and at Presbyterian Hospital, Philadelphia.



Dr. Merrill P. Spencer, instructor in physiology and pharmacology, completed the requirements for the degree of doctor of medicine at Baylor University College of Medicine. He completed a rotating internship at Hermann Hospital, Houston, before entering the Army in May, 1946. From September, 1948, through June, 1950, he was associated with the Department of Physiology, Western Reserve University, as a United States Public Health Service fellow in physiology. He served as medical resident in the Crile Veterans Administration Hospital during the year 1950-1951.

Dr. Donald Leonard Whitener, a graduate of Johns Hopkins University, has been appointed instructor in obstetrics and gynecology. Following a rotating internship and a residency in pathology at Southern Baptist Hospital in New Orleans, Dr. Whitener completed his training in obstetrics and gynecology at the North Carolina Baptist Hospital, June 30, 1951.

### NORTH CAROLINA BOARD OF MEDICAL EXAMINERS

The State Board of Medical Examiners will meet at Grove Park Inn, Asheville, Monday, October 8, at which time applicants for licensure by endorsement of credentials will be interviewed.

### PIEDMONT PROCTOLOGIC SOCIETY

The Piedmont Proctologic Society held its annual August meeting in Asheville at the Battery Park Hotel. Dr. C. Ross Deeds of Hendersonville, president, presided over the business session and election of officers for the coming year. Those elected were: president, Dr. J. Milton Stockman of Knoxville, Tennessee; vice president, Dr. Charles S. Drummond of Winston-Salem; and secretary, Dr. B. Richard Jackson of Raleigh.

During the scientific session, the following papers were presented: "The Incidence of Post-operative Complications in Anorectal Surgery," by Dr. B. Richard Jackson; "Anesthesia in Proctologic Surgery," by Dr. William Galvin of Emory University Medical School, Atlanta; and "The Reduction of Post-Operative Pain after Rectal Surgery" by Dr. Edgar Boling of Atlanta.

### NORTH CAROLINA ALCOHOLIC REHABILITATION PROGRAM

One of the biggest jobs facing the North Carolina Alcoholic Rehabilitation Program today is holding the contact with patients who complete the treatment at the Butner ARP Center, according to S. K. Proctor, executive director of the program.

Since the Butner Center is set up for voluntary admissions, all patients are accorded essentially the same privacy they might expect from any other hospital for any other illness. Their medical history and charts are confidential and available only to another physician who might be attending the patient. Public and private case work agencies cannot be used in contacting and reporting the progress of discharged patients.

To insure such confidence, Director Proctor writes personal letters to the discharged patient and his physician one month after the patient leaves. Special questionnaires accompany the respective letters. Subsequent letters and questions are sent out at the end of three months, six months, and one year.

The physician's questionnaire seeks the following information: Contact with patient since Butner, any professional aid for intoxication or acute alcoholism, change in frequency or severity of bouts, and improvement in attitude or social behavior, any help Butner rendered, patient's opinion of himself or the center.

### CARTERET COUNTY MEDICAL SOCIETY

The Carteret County Medical Society held its regular monthly dinner meeting at the Morehead City Hospital, Monday, August 13, the hospital acting as host. Dr. C. S. Maxwell, president, presided.

Mr. Clark Williams, a trained venereal disease investigator, who has just been assigned to Carteret County by the Public Health Service on a part-time basis, appeared before the Society, explaining that he was at the service of the private physicians, upon request, to interview VD patients and do follow-up work. The object of the follow-up work is to see that patients are not delinquent in their treatment. Mr. Williams also serves the Camp Lejeune and Cherry Point areas. He stated that a recent study at Camp Lejeune showed that the camp had a higher VD rate than any other base in the Continental United States, and that the government is therefore undertaking intensive control work in this area.

Mr. Williams, who was introduced by Dr. Thomas Ennett, county health officer, will work out of the Carteret County Health Department.

Dr. M. B. Morey, secretary, read a letter from the Grievance Committee of the North Carolina State Medical Society, urging all physicians to be more prompt in reporting births and deaths.

The society discussed the necessity for making emergency medical and surgical services available on Sundays. A plan was adopted which will make such services available through the Morehead City Hospital.

N. Thomas Ennett, M.D.  
Corresponding Secretary

### NORTH CAROLINA STATE VISION TESTING PROGRAM

North Carolina's new vision testing program for safer driving began July 16. More than 30,000 persons a month are expected to apply for a motor vehicle operator's license and to have their visual skills measured with the Ortho-Rater.

Twelve visual performance tests and one slide of highway sign recognition are used in the Ortho-Rater. However, the standards for driver licenses remain unchanged, as only the results of the far acuity tests determine the applicant's visual classification for licensing. The objectives of the nine additional tests are: (1) to provide a public service in stimulating those with low visual performance to seek professional advice; and (2) to supply research data for determining the most desirable standards for safe driving.

The licensing examiner will compare the Ortho-Rater test scores against a "Basic Visual Health Standard," as well as comparing it to the licensing standards. If the subject fails to meet the licensing standards, he will be given his record card and advised to see a professional man, with instructions to give the card to the doctor whom he consults. If he does meet the visual requirements for his driver's license but fails to meet the basic visual health standard, the examiner will also recommend that he seek professional aid. Record cards should be returned to the examiner by the individual, except when mailing it to the examiner might be preferable.

Driver licenses will be issued either "unrestricted" or "with restrictions." The following list of standards describes the visual requirements and the restrictions which are applied.

- Standard 1: Two-eyed vision without glasses, 20/40 or better each eye. Unrestricted license.
- Standard 2: Two-eyed vision with corrective glasses, 20/50 or better each eye. Restriction: corrective glasses must be worn.

Standard 3: One-eyed vision without glasses, 20/29 or better in either eye. Unrestricted license.

Standard 4: One-eyed vision with corrective glasses, 20/40 or better in either eye. Restriction: corrective glasses must be worn.

Standard 5: Two-eyed vision, each eye acuity 20/67 or better. Restrictions: corrective glasses must be worn; 45 miles per hour speed limit.

Standard 6: Two-eyed vision, each eye acuity 20/100 or better. Restrictions: corrective glasses must be worn; 45 miles per hour speed limit; daylight driving only. Other restrictions applied at discretion of examiner.

Standard 7: One-eyed vision, either eye acuity 20/50 or better. Restrictions: corrective glasses must be worn; 45 miles per hour speed limit.

Standard 8: One-eyed vision, either eye acuity 20/67 or better. Restrictions: corrective glasses must be worn; 45 miles per hour speed limit; daylight driving only. Other restrictions applied at discretion of examiner.

Although the present licensing standards are quite low in relation to what we usually consider to be a minimum health standard, it is reasonable to assume that future standards for licensing may be modified as a result of extensive research on the relationships between visual standards and safe driving. The state has given a research grant to North Carolina State College for the purpose of statistically analyzing vision scores and highway accidents over a period of several years. This research program will attempt to determine factually the part vision plays in highway safety and to establish, if possible, visual standards based upon the laws of probability that will improve safety on state highways. This is the first extensive research on a statewide scale that has ever been attempted.

Research at Purdue University has already established relationships between vision, as measured on the Ortho-Rater, and industrial accidents. These studies have identified vision as one specific factor contributing to safety. By improving the vision of the average licensed driver it is reasonable to assume, on the basis of present information, that a small but vital step will be taken in promoting highway safety. Vision is an especially important factor because a high percentage of individuals can be improved directly through professional services.

The Highway Safety Division of the Department of Motor Vehicles requests your cooperation in identifying those drivers who, in your opinion, should be re-examined periodically. For instance, a progressive pathologic condition which in a year's time might seriously affect the individual's driving ability should be reported on the record card under "Doctor's Remarks." In such cases the card can be mailed directly to the examiner whose name and address will be on the back of the card, or the card can be mailed to the Chief of Licensing Examiners, Highway Safety Division, in Raleigh.

#### EDGEWOOD SANITARIUM FOUNDATION

The Fowler Lectures (second annual series), featuring a symposium on alcoholism and drug addiction, religion and psychiatry, were delivered at Edgewood Sanitarium, Orangeburg, South Carolina, September 20, 21. Dr. Orin R. Yost was moderator. Among the speakers were Dr. Raymond McCarthy, executive director, the Yale Plan Clinic, New Haven, Connecticut; Dr. Leon Greenberg, also of Yale; the Rev. Francis McPeck, Council for Social Action, Congregational Christian Churches, Chicago; Dr.

Harry Isbell, director, Drug Research Center, Lexington, Kentucky; and Dr. Aaron Rutledge, pastoral counselor, Furman University, Greenville, South Carolina.

#### EMORY UNIVERSITY SCHOOL OF MEDICINE

The Emory University School of Medicine, in cooperation with the Medical Association of Georgia, has announced the fourth annual Postgraduate Course in Medicine and Surgery for General Practitioners, October 8 through 12, at Grady Memorial Hospital Auditorium. The course is designed to present current ideas concerning the diagnostic and therapeutic problems of general practice. The course can also be used in meeting part of the requirements for membership in the American Academy of General Practice. Application should be made to: Director of Postgraduate Education, Emory University School of Medicine, 36 Butler Street, S.E., Atlanta 3, Georgia. Registration fee is \$10.

#### AMERICAN MEDICAL ASSOCIATION

A revised list of "Sources of Motion Pictures on Health" has been prepared by the Committee on Medical Motion Pictures of the American Medical Association. This new mimeographed list includes nine pages of addresses of the major loan and rental libraries, the state health departments' film libraries, and references to printed lists and catalogues. Copies are available from:

Committee on Medical Motion Pictures  
American Medical Association  
535 North Dearborn Street  
Chicago 10, Illinois

#### AMERICAN COLLEGE OF CHEST PHYSICIANS

##### Essay Award

The Board of Regents of the American College of Chest Physicians offers a cash prize award of \$250 to be given annually for the best original contribution, preferably by a young investigator, on any phase relating to chest disease.

The prize is open to contestants of other countries as well as those residing in the United States. The winning contribution will be selected by a board of impartial judges, and the award, together with a certificate of merit, will be made at the forthcoming annual meeting of the College. Second and third prize certificates will also be awarded.

All manuscripts submitted become the property of the American College of Chest Physicians and will be referred for consideration to the editorial board of the College journal, *Diseases of the Chest*. The College reserves the right to invite the winner to present his contribution at the annual meeting. Contestants are advised to study the format of *Diseases of the Chest* as to length, form and arrangement of illustrations, to guide them in the preparation of the manuscript.

The following conditions must be observed:

- (1) Five copies of the manuscript, typewritten in English, should be submitted to the executive office, American College of Chest Physicians, 112 East Chestnut Street, Chicago 11, Illinois, not later than April 1, 1952.
- (2) The only means of identification of the author or authors shall be a motto or other device on the title page, and a sealed envelope bearing the same motto on the outside, enclosing the name of the author or authors.

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### Postgraduate Course

The annual Postgraduate Course in Diseases of the Chest sponsored by the Council on Postgraduate Medical Education and the New York State Chapter of the American College of Chest Physicians, will be presented at the Hotel New Yorker, New York City, November 12-17, 1951.

This course will emphasize the recent advancements in the diagnosis and treatment of chest diseases. The course is open to all physicians, but the number of registrants will be limited. Tuition fee is \$50.00; applications will be accepted in the order in which they are received. Applications should be sent to the American College of Chest Physicians, 112 East Chestnut Street, Chicago 11, Illinois.

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### Interim Session

The Interim Session of the American College of Chest Physicians will be held at the Ambassador Hotel, Los Angeles, California, on December 2 and 3, 1951. On Sunday, December 2, the California chapter will sponsor a scientific session, including round table luncheon discussions and an x-ray conference. A banquet will be held in the evening. The Board of Regents of the American College of Chest Physicians will meet on Monday, December 3, as well as various councils and committees of the College.

Dr. Edward W. Hayes, Monrovia, California, is chairman of the general arrangements committee for the Interim Session of the College, and Dr. Alfred Goldman, Beverly Hills, is chairman of the scientific program committee.

### NATIONAL SOCIETY FOR CRIPPLED CHILDREN AND ADULTS

Appointment of Louise Baker, nationally known author, lecturer, and research writer, as director of public relations for the National Society for Crippled Children and Adults, the Easter Seal Agency, has been announced by Lawrence J. Linck, executive director.

Mrs. Baker, who is herself an amputee and has for many years been a dynamic leader in the work on behalf of the crippled, assumed her new post September 1. She comes to Chicago from the Fels Research Institute, Antioch College, Yellow Springs, Ohio, where for the past two years she has distinguished herself as assistant to the director and editor and instructor in psychology at Antioch College.

Harry V. Gilson, associate Commissioner of Education for the state of New York, has been appointed Director of Education of the society, Director Linck also announced.

Mr. Gilson, one of the foremost men in the nation in his field, came to Chicago from Albany, New York, to organize the National Society's newly created Department of Education. He will be responsible for directing a nationwide professional and parent education program concerned with the problems of the crippled.

### AMERICAN CANCER SOCIETY

The first major attempt to clarify and standardize the complicated terminology of cancer has been made by the American Cancer Society. Publication of a new book, **Manual of Tumor Nomenclature and Coding**, was announced recently by the society. The book will be distributed to cancer clinics and registries, hospitals, health departments, medical schools, research centers, and to individual pathologists, surgeons, and statisticians.

Widespread use of the new tumor code is expected, since it will be used in conjunction with the American Medical Association's **Standard Nomen-**

**clature of Diseases and the World Health Organization's International Statistical Classification of Diseases, Injuries and Causes of Death.**

Employment of the code will result in more comprehensive statistical records, since it classifies both benign and malignant tumors according to histologic origin. Heretofore, most cancer death and incidence records have indicated only the body site of tumors. The final aim of statistical studies is to reflect organized knowledge back to the clinician for the patient's benefit.

### AMERICAN HEARING SOCIETY

W. Earl Prosser, Columbus, Ohio, has been appointed executive vice president of the American Hearing Society, Thomas L. Tolan, M.D., Milwaukee, president, announced recently. He will assume duties at headquarters on October 1.

The newly appointed official succeeds the late Harry P. Wareham, who served as administrator of this nonprofit, social service organization from 1946 to the time of his death this summer.

### NATIONAL GASTROENTEROLOGICAL ASSOCIATION

The National Gastroenterological Association held its sixteenth annual convention and scientific sessions at The Drake in Chicago, Illinois, on September 17, 18, 19, 1951.

The program included a symposium on peptic ulcer, in which Dr. Andrew C. Ivy of the University of Illinois presented the physiologic aspects; Dr. David J. Sandweiss of Detroit, Michigan, the medical aspects, and Dr. Lester R. Dragstedt of Chicago, Illinois, the surgical aspects.

Symposiums on the pancreas, psychosomatic medicine and carcinoma, as well as individual papers, were also presented.

Immediately following the convention, on September 20, 21, 22, 1951, the association conducted a course in postgraduate gastroenterology at The Drake, under the direction of Drs. O. H. Wangenstein, Minneapolis, Minnesota, and I. Snapper, New York, New York.

### AMERICAN DERMATOLOGICAL ASSOCIATION Annual Prize Essay Contest

The American Dermatological Association is again offering a prize of \$300 for the best essay submitted for original work, not previously published, relative to some fundamental aspect of dermatology or syphilology. The purpose of this contest is to stimulate younger investigators to original work in these fields.

Manuscripts typed in English with double spacing and ample margins as for publication, together with illustrations, charts, and tables, all of which must be in triplicate, are to be submitted not later than December 1, 1951. The manuscripts should be sent to Dr. Louis A. Brunsting, Secretary, American Dermatological Association, 102-110 Second Avenue, Southwest, Rochester, Minnesota; those which are incomplete in any of the above respects will not be considered.

Competition in this prize contest is open to scientists generally, not necessarily to physicians.

The prize winning candidate may be invited to present his paper before the annual meeting of the American Dermatological Association with expenses paid in addition to the three hundred dollars prize. Further information regarding this essay contest may be obtained by writing to the secretary of the American Dermatological Association.

## INTERNATIONAL COLLEGE OF SURGEONS

United States Senator Estes Kefauver delivered an address on "The America of Tomorrow" at the sixteenth annual assembly of the International College of Surgeons, United States and Canadian chapters, in Chicago, September 10-13.

More than 100 papers, together with a dozen symposia, clinics and discussion groups, comprised the scientific program, covering all the range of modern surgery. A program of surgical motion pictures and scientific and technical exhibits rounded out the meeting.

The International College of Surgeons was founded in 1935 in Geneva, Switzerland, by Dr. Max Thorek of Chicago "to create a common bond among surgeons of all nations and to promote the highest standards of surgery throughout the world." It now has more than fifty chapters, in every continent and every major country of the world outside the "iron curtain" with some 5,000 members. The International president is Dr. Herbert Acuff of Knoxville, Tenn., while Dr. Thorek is the permanent secretary-general.

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Formation of a new Women's Auxiliary has been announced by the United States Chapter of the International College of Surgeons. The Auxiliary functioned for the first time at the sixteenth annual assembly of the United States and Canadian chapters of the College in the Palmer House, Chicago, September 10 to 13 inclusive.

## NATIONAL ASSOCIATION FOR THE PREVENTION OF TUBERCULOSIS (England)

Announcement has been made by the National Association for the Prevention of Tuberculosis of the third Commonwealth and Empire Health and Tuberculosis Conference to be held at Central Hall, London, July 11-13, 1952. The sessions, which will include lectures and discussions as well as visits to sanatoria, hospitals, and clinics, will be open to all interested in preventive medicine, including the medical profession, commercial and industrial executives, nurses, social workers, health administrators, public authorities, regional hospital boards, and the like. Further details may be had by writing to the secretary-general of the NAPT, Tavistock House North, Tavistock Square, London, W.C.I., England.

## DEPARTMENT OF DEFENSE

### Colonel R. L. Black Appointed Army Medical Service Corps Chief

Secretary of the Army Frank Pace, Jr., has announced the appointment of Colonel Robert Lee Black as Chief of the Army's Medical Service Corps, to succeed Colonel Othmar F. Goriup, who completed his statutory four-year term on September 24.

Colonel Black is now in the Far East Command, accompanying Major General George E. Armstrong, Army Surgeon General, on the latter's inspection of medical activities in Japan and Korea.

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### Armed Forces Blood Donor Program

The Department of Defense is planning a concerted effort to replenish its "gravely depleted" supply of human blood plasma.

The depletion of the Armed Forces' plasma reserve is due primarily to the extensive use of plasma in Korea, where its use in forward areas had kept many of the wounded alive until they could be evacuated to an area where whole blood was available.

To assure each soldier, sailor, airman and Marine an adequate reserve of this vital fluid for use when and where he needs it, the Department of Defense has financed the expansion of blood processing laboratories, and asked the Red Cross to collect for the Defense Department nearly three million pints of whole blood, to be processed into more than a million plasma units between July 1, 1951 and July 1, 1952. This means that 270,000 pints per month must be collected during this fiscal year for the Defense Department plasma reserve.

Blood processing laboratory capacity has been expanded and will be capable of handling more than 280,000 pints monthly by January, 1952. In the past few months collections have averaged 35,000 to 40,000 pints monthly.

## DEPARTMENT OF THE ARMY

### Brigadier General Hays Named Deputy Surgeon General

Brigadier General Silas B. Hays, MC, recently assumed his duties as Deputy Surgeon General of the Army following a brief ceremony in the office of Major General George E. Armstrong, the Surgeon General.

In his last assignment as Surgeon of the Japan Logistical Command, General Hays was responsible for management of Army hospitals in Japan, the evacuation of all casualties from Korea, and the furnishing of medical supplies and equipment for both Japan and Korea. He succeeds Brigadier General Paul I. Robinson who will take command of Fitzsimons Army Hospital at Denver, Colorado.

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### Army's Health Is Still Good

Despite six months of Korean combat and the Army's rapid expansion during the last half of 1950, the Army's health as reflected in medical admissions and the proportion of the Army rendered non-effective through illness or injury was still better for 1950 than in two of the four post-World War II years, according to Major General George E. Armstrong, Army Surgeon General.

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### Army Medical Personnel Decorations in Korea

A preliminary survey reveals that over 2,800 decorations have already been awarded to Army Medical Service personnel for service in the Korean campaign, Major General George E. Armstrong, Army Surgeon General, announced recently.

The total includes a posthumous award of the Medal of Honor to Private Richard C. Wilson, aid man with the 187th Airborne Infantry Regiment; nine Distinguished Service Crosses; two Distinguished Service Medals; 149 Silver Stars; twenty-eight Legion of Merit awards; two Distinguished Flying Crosses; eleven Soldier's Medals; 1,369 Bronze Star Medals; nine Air Medals; 126 Commendation Ribbons and 1,110 Purple Hearts.

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### Army to Use New Foot Powder

Army medical research has developed a new foot powder that reduces foot perspiration, offering partial protection against cold injuries to troops living or fighting in cold weather areas, the Department of the Army announced recently.

Arctic tests have shown, according to Major General George E. Armstrong, Army Surgeon General, that the foot powder reduces sweating by as much as 24 per cent. This development is of major importance to troops in a cold environment, because cold injury more frequently involves the feet than any other extremity. Trenchfoot develops in "wet cold," whereas frostbite is associated with "dry cold."



The new preparation has a powdered talc base and contains aluminum chloride and potassium alum, the anhydrotic agents, as well as boric acid, salicylic acid and starch.

### VETERANS ADMINISTRATION

Veterans Administration announced the award of a contract for construction of a 162 bed definitive-treatment hospital building at Salisbury, North Carolina, for neuropsychiatric patients suffering with tuberculosis.

The structure, which will cost \$2,314,244, is part of the 973 bed neuropsychiatric hospital under construction at Salisbury.

Contracts in the new building were also let for the installation of elevators and clinical laboratory equipment.

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Government life insurance term policies held by veterans and those in service may be renewed at the expiration of any term period for a successive period of five years without physical examination, as the result of two amendments to the insurance laws signed by the President, August 2, Veterans Administration has announced.

Public Law 104 grants this right to holders of National Service Life Insurance, and Public Law 101 contains a similar provision applicable to United States Government Life Insurance. Formerly, renewal was authorized by the Congress for one additional five year period at a time. The new legislation permits such renewals indefinitely.

### FEDERAL SECURITY AGENCY

#### Public Health Service

Various "new drugs" used in the treatment of tuberculosis will be evaluated under more than a dozen of the grants awarded by the Microbiological Institute of the National Institutes of Health.

These grants are among a total of 102 grants amounting to \$1,088,952 which were awarded to non-Federal medical scientists by the National Microbiological Institute with the approval of Dr. Leonard A. Scheele, Surgeon General of the Public Health Service, on the recommendation of the National Advisory Health Council. Among the recipients was Dr. A. W. Wharton of Duke University, who will study host parasite relationships in the feeding of mites.

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Publication of the **Proceedings: First Research Conference on Psychosurgery** has been announced by the National Institute of Mental Health, Public Health Service. The research conference group was established upon the recommendation made by the National Advisory Mental Health Council at its December, 1948, meeting. The Council believed that it would be useful to set up such a group to conduct three annual conferences for the exchange of information and the development of plans for research in the field of lobotomy.

The first Research Conference on Psychosurgery met in New York on November 17-18, 1949, under the chairmanship of Dr. Fred Mettler, Columbia University, to discuss "Criteria for Selection of Psychotic Patients for Psychosurgery." The Conference, supported by a three year grant from the National Institute of Mental Health, comprised twenty-three persons representing psychiatry, psychology, neurology, neurosurgery, and other related professional groups.

The **Proceedings** also contains a report of the survey conducted by the National Institute of Mental Health in 1949 on the extent to which psychosurgery procedures are being used in mental hos-

pitals, and also the report of the 1949 survey on the types of research being conducted on scientific problems relating to lobotomy.

In accordance with the Council recommendation that transactions of the Conference be published for use by Research Study Section members and the large number of investigators in this field, the **Proceedings** were edited by Dr. Newton Bigelow and published in July, 1951, by the National Institute of Mental Health. Copies of the book, (PHS Publication No. 16) may be purchased from Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C., for one dollar a copy.

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#### Longer Life for "Blue Babies"

Prospects for a longer, healthier life for the nation's "blue babies" are being brightened by a plan to provide surgical and hospital care for these children in regional heart centers, Katharine F. Lenroot, chief of the Children's Bureau, Federal Security Agency, announced.

The first regional heart center, now in operation in Connecticut, has been arranged with the Connecticut State Department of Health at the Grace-New Haven Community Hospital. Patients are accepted not only from Connecticut but experimentally from Rhode Island as one of the states in the region.

Other centers are being planned in the East, South, Midwest, Southwest, and West Coast to provide full geographic coverage for the entire country. The program is expected to be in full swing by 1952. The centers will serve not only "blue babies" but children with other congenital heart malformations which respond to surgery.

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#### Facts on Immunization

The latest facts on immunization for travelers going to every section of the world are detailed in a booklet, just released by the U. S. Public Health Service, entitled **Immunization Information for International Travel**. It includes official information on the immunizations required and recommended by each country and the immunizations recommended by the Public Health Service as a precautionary measure for persons traveling abroad. Other items of importance to the traveler include an explanation of the procedure for having inoculations recorded on the International Certificate of Inoculation and Vaccination; a list of Public Health Service facilities where yellow fever inoculations can be obtained; and maps showing the yellow fever endemic areas of the world.

All changes in immunization requirements made after the publication of this booklet will be given in the weekly "Communicable Disease Summary," released by the Public Health Service, under the heading "Quarantine Measures." Travelers can obtain this information from local and State health departments.

The booklet may be purchased from the Superintendent of Documents, Government Printing Office, Washington, D. C., for 20¢ a copy. A twenty-five per cent discount is allowed on orders of 100 copies or more delivered to the same address.

(BULLETIN BOARD CONTINUED ON PAGE 480)

**Functional cardiovascular disease.** Friedman found low-grade fever, rarely exceeding 100.5 F., in more than 30 per cent of patients suffering from "functional cardiovascular disease." He could detect no evidence that the fever was a manifestation of infection, either acute or chronic.—Weiss, E.: Emotional Factors in Cardiovascular Disease, Springfield, Ill., Charles C. Thomas, 1951, p. 39.

## BOOK REVIEWS

**Stress.** By Hans Selye, M.D., Professor and Director of the Institut de Medecine et de Chirurgie experimentales, Universite' de Montreal. 1025 pages. Price, \$14.00. Montreal, Canada: Acta, Inc., 1950.

This tome of information on the problem of stress contains twenty introductory pages, 822 pages of text, and 203 pages of references, averaging almost thirty references to the page.

The opening pages contain a brief list of reviews concerning the general-adaptation-syndrome, which have appeared in English and other languages, followed by a brief history of the terms "milieu interieur," "homeostasis," "general tissue hormone," and so forth, which led to the author's formulation of the theory of the general-adaptation-syndrome. He then elaborates on the principal facts and theories upon which this syndrome is based, and defines the nonspecific changes and agents of the alarm reaction, which is described as the sum of all nonspecific phenomena elicited by sudden exposure to stimuli affecting large portions of the body.

The alarming stimuli or stress agents which elicit the general-adaptation-syndrome are reviewed. They include such phenomena as trauma, hemorrhage, burns, temperature, frost bite, x-rays, other ionizing radiations, electric injury, nervous stimuli, muscular exercise, bed rest, anoxia and asphyxia, infections, anaphylactic reactions, reactions to drugs and other toxic compounds, hormones, diet, gravity shock, and so forth.

The author next describes the special physiology and pathology of systemic stress, breaking this subject down into a discussion of the stage of the alarm reaction through shock and counter-shock, the stage of resistance, and the stage of exhaustion. He then goes on to elaborate on the changes in energy metabolism, body temperature, carbohydrate metabolism, lipid metabolism, nitrogen metabolism, salt and water metabolism, hormone metabolism, participation of enzymatic processes, alterations in the storage and utilization of the vitamins, and the interaction of the hemopoietic system.

Following this discussion is a section on those diseases of metabolism in which a derangement of adaptation to systemic stress has been expected to play a major role, but in which at present it is difficult to delimit those metabolic derangements in which maladaptation to stress is a major factor. In this section the author also discusses various diseases involving the pancreas and the adrenal, thyroid, gonad, and pituitary glands. He treats the reactions occurring in the cardiovascular system, the respiratory system, the skeletal, muscle and nervous systems, sense organs, the gastrointestinal system, the liver, the kidneys, and serous cavities, as a manifestation of the alarm reaction.

The author closes with a general summary of the general-adaptation-syndrome and of the principal criticisms of the concept; the clinical applications of the concept, and problems for future research. He concludes that all agents can act as stressors, producing both stress and specific reactions; and that no one agent can produce one without the other. Specific actions affect the target organs in a variety of ways; stress acts only through the general-adaptation-syndrome, and causes defense and damage.

The general practitioner and the medical student will find this book difficult to read. However, it will be studied with interest by the specialist.

and particularly by those interested in the somewhat vague and borderline disturbances frequently seen by the internist and the specialist. It should prove a strong stimulus to future research on this problem. This book represents a tremendous effort on the part of a person who has devoted a large part of his life to this field of study.

**Master Your Mind.** By Samuel Kahn, M.D., Ph.D., Department of Psychology and Psychiatry, Long Island University; formerly Clinical Professor of Neurology and Psychiatry at Georgetown and George Washington Universities. 262 pages. Price, \$3.00. New York: Rockfort Press, Inc., 1951.

This book apparently was written primarily for students from high school through college and university days, but it ends with advice to parents on the proper way to bring up their children. According to the introduction by Dr. Maurice J. Lewi, it "is intended to ameliorate and to restore to normality the 'wires that have been crossed' and to educate to happiness those who have lost their way to that haven." It contains some good advice on forming habits of study; though it is hard for this reviewer to accept as essential that one "Make it a habit to get up early and go to bed early." It is also hard to believe that "If you put sparrow eggs under canaries, there will be little trouble in developing singing sparrows."

The book should be of some help to the ambitious student, but it would be more helpful if it had been better organized and boiled down to much less than its present length.

**Freud: Dictionary of Psychoanalysis.** Edited by Nandor Fodor and Frank Gaynor. 208 pages. Price, \$3.75. New York: Philosophical Library, 1950.

This dictionary covering psychoanalytic terminology introduced by Freud is about as authoritarian as any such work can be at this time, because the master himself is dead. The editors have included practically all the special words and expressions which have come from Freud's writings, and they have given understandable definitions, too. Regardless of these definite statements, there will still be room for argument whenever psychiatrists and psychoanalysts get together. It is usually possible to shade the meanings of even written words, especially when they are taken out of their total setting. It must be remembered that Freud changed his ideas and his definitions as time went on.

To give one definition for many of the words is a prodigious and brave undertaking. For example, the word "unconscious" means many things to many men. Some learned people believe that this term applies only to sleep, narcosis, or head injury. They like to believe that in the waking state we are fully aware of all our motivation. In a recent book by J. G. Miller entitled *Unconsciousness*, the author has identified sixteen distinct ways that the word "unconscious" has been employed. Regardless of this difficulty, we must admit that Freud had rather concise definitions for his terminology and that he made valuable contributions to the understanding of behavior and abnormalities of behavior.

For whom this dictionary was written arises as a question in the reviewer's mind. The well qualified psychoanalyst will know practically all the information contained in the book, and he probably will have his own definitions in addition to some that are given. The doctor of medicine, who is not a psychiatrist, might very often consult such a book in a library for the meaning of certain words or expressions, but probably would not keep it as a handy reference book. Certainly the



book should be in every medical library. It does appear that this dictionary will be of value to those who are in the broad fields of psychiatry, psychology, social work, nursing, and the like. Others, too, in the fields of education, ministry, law, and public health may find it a valuable reference book.

There can be some slight criticism of the display of the title **Freud: Dictionary of Psychoanalysis**. This gives a distinct impression that the book was written by Freud and perhaps found at a late date and translated by the authors, but they have done a good enough job of translating and choosing material so that there is no need for any misleading title.

**Physiology of Shock.** By Carl J. Wiggers, M.D., Sc.D. Professor of Physiology and Director, Department of Physiology, School of Medicine, Western Reserve University. 478 pages. Price, \$5.00. New York: The Commonwealth Fund, 1950.

Dr. Wiggers and his collaborators began the investigation of shock many years ago, and at about the start of World War II, he began a new intensive study of this problem under the support of The Commonwealth Fund. This book is essentially a review and correlation of the results of the many studies which he and his collaborators carried out in this period, together with a general review of the literature on shock, beginning as far back as the early 1800's.

The book outlines the problem of shock, the approaches that have been made to it, the descriptions and definitions that have been applied to the term, and the various types of shock which have been described in the literature, including traumatic, hemorrhagic, and burn shock, medical shock, and circulatory failure. The various clinical phenomena associated with shock are described in this section.

Dr. Wiggers then presents the necessary criteria for establishing the condition of experimental shock, and the methods which have been used for the production of experimental shock, such as various forms of trauma and procedures for bleeding. He follows this with an analysis of the hemodynamic changes; the alterations in pulse contours; the arterial and venous blood pressures; the changes in blood volume; the postmortem findings; the alterations in vasomotor tone; cardiac output and coronary flow; the mechanisms of the peripheral pooling of blood and capillary trapping of blood cells; the role of the venopressor mechanisms; the alterations in cardiac dynamics; the respiratory and oxidative functions in shock; the disturbances in carbohydrate and protein metabolism; and the alterations in electrolyte balance.

The toxemic and neurogenic factors concerned in the initiation of shock and the involvement of special organs such as the adrenal glands, the liver, the alimentary tract, and the kidneys are then discussed. In conclusion, he summarizes the sequential reactions leading to that irreversible state which he calls shock, and poses some of the challenging, unsolved problems.

The book is excellent for the surgeon and internist, who face daily the problems of early diagnosis, prevention, and treatment of shock, and is especially recommended to the investigator and the student who wish accurate insight into the fundamental processes leading to the state of shock. It is well written and well indexed, and contains a large number of references at the conclusion of

each chapter; the total references number well over 900. There are fifty-six figures and sixteen tables.

**Researches in Binocular Vision.** By Kenneth N. Ogle, Ph.D., Section on Biophysics and Biophysical Research; Research Consultant in the Section on Ophthalmology, Mayo Foundation and Mayo Clinic, Rochester, Minnesota. 345 pages, with 182 figures and 26 tables. Price, \$7.50. Philadelphia and London: W. B. Saunders Company, 1950.

While this distinguished study will probably not receive widespread attention because of the somewhat esoteric nature of its subject matter and the limited number of people interested in its rather difficult concepts, its value as the most complete and current compilation of information on binocular vision cannot be disputed.

This study, like much truly basic and searching investigation, does not make easy reading for the casual student, but it is invaluable to the ophthalmologist seeking a fundamental understanding of binocular cooperation, or to the scientist pursuing investigation in any allied branch of ocular physiology. A certain grounding in the terminology and concepts of binocular function is a great aid in reading it.

To those seeking to further their basic understanding of this phase of ocular physiology and willing to give it the needed concentrated attention, this volume is strongly recommended. It will doubtless be the outstanding reference on the subject for years to come.

**From A Doctor's Heart.** By Eugene F. Snyder, M.D. 251 pages. Price, \$3.75. New York: The Philosophical Library, 1951.

This book grew out of an article on coronary heart disease written, at the request of the editor of a local newspaper, by Dr. Snyder, while himself recovering from coronary thrombosis. The article aroused so much interest that he was encouraged to expand it into a book.

The original article was devoted altogether to a discussion for the layman of coronary heart disease. The book contains a graphic description of a severe myocardial infarction, based upon the author's own experience; a discussion of the treatment; and much wholesome advice to business and professional men as to the best ways to avoid such an event.

Woven into the story of his heart attack is a wealth of human interest. The author was born in Russia. He left there when he was 21 years old for Czechoslovakia, where he studied and practiced medicine until 1939, when he came to the United States just in time to escape Hitler's invasion of Czechoslovakia. Just after his graduation he married a Russian classmate. He has practiced in Chicopee Falls, Massachusetts, since coming to this country.

It is easy to understand how such a varied life enables Dr. Snyder to take a broad view of world events, and to appreciate the privileges which most Americans take for granted. The book is dedicated to the memory of his parents and of his wife's, "who, with countless other victims, were murdered by those who scoffed at human sanctity." It is evident, however, that he did not let his tragic experiences embitter him; if possible, they gave him more sympathy for all mankind.

The book is in the form of a Socratic discussion between the author, his physician-wife, and his teen-age son, in which the son plays the role of Socrates, and plies his parents with numerous and

varied questions. The medical profession is given an opportunity to see itself through a patient's eyes. An eminent cardiologist "treated my sick heart expertly, but was not interested in the state of the rest of my body and soul. A psychiatrist . . . descended from his cloud-swept altitudes . . . trying to psychoanalyze me . . . at a time when I most needed physical and mental rest . . ." The third physician who came into the picture was an old general practitioner, "who has a broad concept of medicine, and who treats . . . the whole living man—not an organ or system of organs."

This unusual book should be of interest to any intelligent reader, layman or doctor, and should give increased respect for one who could overcome so many obstacles and retain such a sane, tolerant outlook on life as has the author. It should make every American more proud than ever to know how our country is regarded by one of its adopted sons.

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**Textbook of Medicine.** Edited by Russell L. Cecil, M.D., Professor of Clinical Medicine Emeritus, Cornell University; and Robert F. Loeb, M.D., Bard Professor of Medicine, Columbia University. Ed. 8. 1627 pages, with illustrations. Price, \$12.00. Philadelphia and London: W. B. Saunders Company.

Since the first edition appeared in 1927, Cecil's has been recognized as one of the best textbooks on medicine available. It has been four years since the seventh edition was published, so it is time for the work to be brought up to date. In the eighth edition the name of Dr. Robert Loeb appears as co-editor with Dr. Cecil; and Drs. Alexander B. Gutman, Walsh McDermott, and Harold G. Wolff are listed as associate editors. It is gratifying to note that among the 130 contributors three are from North Carolina: Dr. George T. Harrell of Bowman Gray, and Drs. David T. Smith and Eugene A. Stead of Duke.

It is evident from even a cursory examination of the book that a thorough job of revision has been done. Twenty new subjects are discussed, and many new remedies appear for the first time. In spite of the additional information, the size of the book has been reduced by a hundred pages, and its weight by at least a pound.

This new edition can be recommended as a worthy successor to previous editions, and may be expected to retain its place in the forefront of medical textbooks.

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**Clinical Pediatric Urology.** By Meredith Campbell, M.D., Professor of Urology, New York University Post-Graduate School. 1112 pages. Price, \$18.00. Philadelphia and London: W. B. Saunders Company, 1951.

This volume on pediatric urology is a condensation and revision of the previous two volume work produced by the same author. It is a text which has been long-awaited and which fills a definite need in the practice of any physician who has children as patients. Dr. Campbell has probably had greater experience in pediatric urology than anyone in the United States.

The arrangement of the text is orderly and logical, and the bibliographies accompanying each chapter are extensive and complete. Illustrations and photographs of x-rays are numerous, and help to make the text easily understandable.

The chapter on nephritis and allied diseases was written by Drs. Elvira Goettsch, and John D. Lyttle, both of whom were the authors of a similar chapter in Dr. Campbell's previous edition.

There is little to criticize in this entire book. It is certainly a monumental task that has been accomplished, and the result is a text which every pediatrician should have. Moreover, any general practitioner who has children as patients could well use it as a frequent reference. It goes without saying that this book is also a must for any urologist.

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**The Mechanics of Cell Division.** By M. J. Kopac, Consulting Editor, and eighteen other authors. 260 pages, illustrated. Price, \$3.50. New York: The New York Academy of Sciences, 1951.

This publication, one of the series of Annals articles published by the New York Academy of Science, is comprised of sixteen scholarly papers by men engaged in various studies of cell division. Most of the papers contain summaries. They are well illustrated with photographs, photomicrographs, diagrams, and graphs. Most are well documented, with extensive bibliographies.

Inasmuch as the book is highly technical, it cannot be proffered as recommended reading for the busy physician. For those engaged in cytological work or interested in the various aspects and ramifications of cell division as it is now being approached experimentally, however, the book presents a great deal of useful and desirable information. It represents an admirable concentration of the best of contemporary analysis in a field which is basic to medicine.

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## ANNOUNCEMENT

The Harvard University Press takes pleasure in announcing that it has become the publisher of the books of The Commonwealth Fund. All orders and requests for information concerning this fine list of books in medicine, public health, and mental hygiene should be sent to Harvard University Press, 44 Francis Avenue, Cambridge 38, Massachusetts.

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# TRANSACTIONS OF THE AUXILIARY

## to the Medical Society of the State of North Carolina

TWENTY-EIGHTH ANNUAL SESSION

Held at Pinehurst, May 8, 1951

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	Mrs. P. P. McCain, Southern Pines
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Recording Secretary.....	Mrs. B. L. Woodard, Kenly

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	Mrs. James F. Lounsbury, Wilmington
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Historian.....	Mrs. Charles H. Gay, Charlotte
Scrapbook.....	Mrs. Albert Lee O'Briant, Raeford
Revisions.....	Mrs. J. T. Saunders, Asheville
Nominations.....	Mrs. Raymond Thompson, Charlotte
Research.....	Mrs. H. C. Lennon, Greensboro
Jane Todd Crawford Memorial—	
	Mrs. J. S. Hiatt, Jr., McCain
Doctors' Day.....	Mrs. Ben G. Kendall, Shelby
Parliamentarian—	
	Mrs. V. C. Lassiter, Winston-Salem
Student Loan Fund—	
	Mrs. Charles M. Norfleet, Jr., Winston-Salem
McCain Bed.....	Mrs. Milton Clark, Goldsboro
Stevens Bed.....	Mrs. G. M. Billings, Morganton
Cooper Bed.....	Mrs. M. I. Fleming, Rocky Mount

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Olivia Abernethy, M.D.....	Elkin
William Raney Stanford, M.D.....	Durham

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Mrs. Edward R. Hipp.....	Charlotte
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1926.....	Mrs. J. Howell Wav, Waynesville
1927.....	Mrs. R. S. McGeachy, New Bern†
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1945.....	Mrs. J. T. Saunders, Asheville
1946.....	Mrs. Erick Bell, Wilson
1947.....	Mrs. Frederick Taylor, High Point
1948.....	Mrs. W. Reece Berryhill, Chapel Hill
1949.....	Mrs. Raymond Thompson, Charlotte
1950.....	Mrs. Thomas Leslie Lee, Kinston

†Deceased.

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Mrs. A. A. Vanore.....	Robbins

## CONVENTION PROGRAM

Monday, May 7, 1951

- 2:00 p.m.—Golf Tournament, Pinehurst Country Club  
 2:00 p.m.—“Sandhills Gardens in Bloom”—(Village Theater). Lecture and Slides—Mr. Ernest Morrell, Southern Pines  
 8:00 p.m.—Executive Board Meeting (Dutch Room)  
 8:30 p.m.—Bingo Party (Pine Room)

Tuesday, May 8, 1951

- 9:30 a.m.—Annual Meeting (Pine Room)  
 1:00 p.m.—Luncheon (Country Club). Fashion Show by Mary Rice Shop, Hamlet  
 7:00 p.m.—President's Dinner and Ball

Wednesday, May 9, 1951

- 8:30 a.m.—Breakfast for State Auxiliary Officers, Committee Chairmen, and Councilors (Stag Room)  
 10:00 a.m.—“Use Wisely the Things that Are Available” (Card Room) Lecture and Slides—Mrs. Shelby Carr, Richmond, Ky.  
 11:00 a.m.—Trip to the Carolina Orchid Gardens

## PRE-CONVENTION MEETING OF THE EXECUTIVE BOARD

Monday, May 7

## Minutes

The annual meeting of the Board of Directors of the Auxiliary to the Medical Society of the State of North Carolina was held in the Dutch Room of the Carolina Hotel in Pinehurst on Monday, May 7, at 8 p.m.

The president, Mrs. Harry L. Johnson of Elkin, presided over the meeting, which was attended by thirty-two members of the Board.

The invocation, given by Mrs. Frederick R. Taylor, was followed by words of welcome from the president.

In the absence of Mrs. B. L. Woodard, recording secretary, Mrs. Charles H. Gay, acting recording secretary, called the roll.

Inasmuch as each board member had previously received a copy of the minutes of the last meeting, it was moved by Mrs. A. L. O'Briant and seconded by Mrs. M. I. Fleming that the reading of these minutes be omitted. The motion carried.

The chairman of past presidents, Mrs. P. P. McCain, being absent, there was no report from this group.

Mrs. B. Watson Roberts, president-elect, spoke briefly on plans for the ensuing year.

Mrs. Thomas Leslie Lee, first vice president in charge of organization, offered her report with those of the district councilors who served as her co-workers. Mrs. Lee introduced these councilors, whose reports were read in succession and approved as a group for filing:

Second District.....Mrs. Ben F. Royal  
 Third District.....Mrs. James B. Lounsbury  
 Fourth District.....Mrs. Leon Robertson  
 Fifth District.....Mrs. Stuart Willis  
 Sixth District.....Mrs. W. P. Richardson  
 Seventh District.....Mrs. R. S. Clinton  
 Eighth District.....Mrs. W. L. Kirby  
 Tenth District.....Mrs. Julian Moore

Mrs. J. E. Smith, First District, and Mrs. A. M. Lang, Ninth District, were absent, and no reports were filed.

Mrs. Lee's report was accepted and filed. Mrs. Lee asked that a copy of the treasurer's report be made available to the first vice president at the

time it is sent to the national treasurer, in order that figures on membership might tally. It was moved by Mrs. Leon Robertson and seconded by Mrs. E. R. Hipp that an acceptable plan for doing this be worked out by the Finance Committee. The motion carried.

Mrs. J. C. Peele, second vice president, gave her report and introduced Mrs. Milton Clark, chairman of the McCain Bed; Mrs. M. F. Fleming, chairman of the Cooper Bed; and Mrs. Charles M. Norfleet, Jr., chairman of the Student Loan, who in turn gave their reports. In the absence of Mrs. G. M. Billings, chairman of the Stevens Bed, her report was read.

Mrs. Norfleet recommended that the Student Loan Fund be increased to \$200. This matter was referred to the Finance Committee.

Committee chairmen were then recognized and gave their reports.

Public Relations.....Mrs. James H. McNeill  
 Legislative.....Mrs. P. G. Fox  
 Press and Publicity—

Mrs. Claude A. McNeill, Jr.

Bulletin.....Mrs. A. C. Bulla  
 Memorials.....Mrs. G. Westbrook Murphy  
 Historian.....Mrs. Charles H. Gay  
 Scrapbook.....Mrs. A. L. O'Briant  
 Research.....Mrs. H. C. Lennon  
 Jane Todd Crawford Memorial—

Mrs. J. S. Hiatt, Jr.

Reports were read in the absence of the following chairmen:

Mrs. P. F. Yates.....Program  
 Mrs. S. E. Warshauer.....Today's Health  
 Mrs. Ben Kendall.....Doctors' Day

It was suggested by Mrs. Milton Clark and generally agreed by the group that a state award for the largest number of subscriptions to *Today's Health* would be an incentive for county groups.

Revisions Chairman, Mrs. John T. Saunders, was absent, but her report was read and studied. A motion was made by Mrs. Lee and seconded by Mrs. Royal that the suggested revisions regarding honorary members be published before the fall Board meeting. The motion carried.

It was moved by Mrs. Richardson and seconded by Mrs. O'Briant that the North Carolina delegates to the national convention be instructed to vote for the proposed changes in the By-Laws. The motion carried.

It was agreed that the item regarding the Student Loan Fund should be handled by the Finance Committee.

All committee reports were accepted and filed.

Mrs. E. R. Hipp, councilor to the Southern Medical Auxiliary, reported briefly on its activities and urged attendance at the Southern Medical Convention in Dallas, in November.

Dr. Rachel Davis, chairman of the Advisory Board, requested that her remarks be made before the General Session.

Mrs. E. C. Judd, treasurer, gave her report, which was accepted.

The president asked if a wedding gift might be sent to the former Miss Catherine Johnson, in appreciation for her help to the Auxiliary in publishing the Auxiliary page of the *North Carolina Medical Journal* for several years. Mrs. Judd moved that a gift be sent. The motion was seconded by Mrs. Fleming and carried.

Mrs. Johnson asked that messages be sent to Mrs. Woodard and Mrs. Saunders because of their absence, and to Miss Louise MacMillan, in appreciation for her help with the Auxiliary page of the *North Carolina Medical Journal*. This suggestion was unanimously approved.



Mrs. Johnson proposed for consideration the idea of forming a group similar to a House of Delegates for the purpose of exchanging ideas and information more satisfactorily within the Auxiliary. It was suggested that this be considered further at the fall Board meeting.

Mrs. Frederick Taylor's suggestion that all Auxiliary meetings (of the Annual Meeting) be concentrated into one day, was also referred to the fall Board meeting.

Mrs. Fleming read a letter from Dr. Easom, in which he listed reasons for the eligibility of two patients, and sought the Auxiliary's advice as to choice of the next occupant for the Cooper Bed. It was agreed by the Board that the Cooper Bed Committee and Dr. Easom were in a better position to make this decision.

Mrs. Johnson stated that a letter from the North Carolina Nurses' Association had been received, requesting financial aid in the publication of a pamphlet to explain more extensively "Nursing and Nursing Education in North Carolina," according to the report made recently by a Survey Committee. It was agreed to contribute to this if the project was approved by the State Medical Society. A motion was made by Mrs. Fleming and seconded by Mrs. O'Briant that the Board recommend that \$200 be allocated for this purpose. The motion carried.

Dr. Davis asked that the Auxiliary continue to give serious thought to the sponsorship of student nurses.

Following the meeting of the Finance Committee, the proposed budget was read and approved.

Recommendations to be presented before the General Session were listed and approved.

There being no further business, the meeting was adjourned.

MRS. CHARLES H. GAY,  
Acting Recording Secretary

## GENERAL SESSION

Tuesday, May 8

### Minutes

The twenty-eighth general session of the Auxiliary to the Medical Society of the State of North Carolina convened at 9:30 a.m. in the Pine Room of the Carolina Hotel in Pinehurst, with Mrs. Harry L. Johnson of Elkin, president, presiding.

Mrs. Ben F. Royal offered the invocation.

The address of welcome was given by Mrs. H. E. Bowman of Aberdeen, and Mrs. R. D. Croom of Maxton responded.

Mrs. G. Westbrook Murphy, Memorials chairman, conducted a memorial service in memory of those Auxiliary members who have passed away since the last annual meeting.

In the absence of Mrs. B. L. Woodard, recording secretary, Mrs. Johnson announced that Mrs. Charles H. Gay would serve in this capacity, and that a telegram of regret had been sent to Mrs. Woodard. It was moved by Mrs. M. I. Fleming and seconded by Mrs. A. L. O'Briant that the reading of the minutes of the last meeting be dispensed with, since all minutes were printed in the *North Carolina Medical Journal*. The motion carried.

The report of the treasurer, Mrs. E. C. Judd, was read and approved. A motion was made by Mrs. H. S. Willis and seconded by Mrs. M. I. Fleming that the proposed budget be accepted. The motion carried. A rising vote of thanks was offered Mrs. Judd for her loyalty and continuous work as treasurer.

Mrs. Johnson introduced Dr. Roscoe McMillan, president of the State Medical Society, who brought greetings and expressed appreciation to the Auxiliary for its service, in numerous ways, to the Med-

ical Society. Dr. McMillan urged that each doctor's wife be fully informed and that we keep a steady watch against compulsory health insurance. He stressed the importance of participation by Auxiliary members in community affairs. To participate in the P.T.A. and other organized groups presents an opportunity to clarify issues which are important to the medical profession. Dr. McMillan questioned the value of too great an emphasis on the technical training of medical students, and expressed a firm belief in the need for developing more loving consideration for each patient. From this, he feels, comes the real satisfaction in the practice of medicine.

Dr. McMillan recommended that the Auxiliary send a representative to the fall Board meeting of the Medical Society.

Mrs. Johnson suggested that a copy of Dr. McMillan's informative and interesting address be sent to the Southern Medical Auxiliary.

Mrs. Roscoe McMillan and Mrs. Frederic C. Hubbard, wife of the president-elect of the Medical Society, were recognized by Mrs. Johnson.

Mrs. T. Leslie Lee, first vice president, took the chair as Mrs. Johnson gave her report, which was accepted.

Mrs. Shelby Carr of the Auxiliary to the Madison County Medical Society, Richmond, Kentucky, was recognized by Mrs. Johnson.

In regard to the question of delegates to the American Medical Association Convention in Atlantic City, Mrs. P. P. McCain proposed that the wives of all State Medical Society delegates be made Auxiliary delegates. A motion to this effect was made by Mrs. Royal, seconded by Mrs. Taylor, and carried.

Dr. Rachel Davis, Advisory Board chairman, commended the Auxiliary for its growth, accomplishments and ideals, and expressed the gratitude and pleasure of the Medical Society in these achievements. "Laurels are not to rest upon, but to proceed from," Dr. Davis said. She stressed the importance of public relations in every walk of life, and urged Auxiliary members to assume this responsibility for busy husbands. "Now is the time to pursue the defeat of socialized medicine; for when real clamor for government control of medicine arises again, we may be too busy to do our best," she emphasized. She also urged that all Auxiliaries have medical advisers, and that they be invited to the Auxiliary meetings.

Reports of the executive officers followed. Mrs. Thomas Leslie Lee, first vice president and chairman of organization, gave her report and introduced the councilors in attendance. Mrs. J. C. Peele, second vice president and chairman of activities, presented her report and introduced chairmen under her supervision. Their reports were heard in turn. Reports of the corresponding and recording secretaries were read, and all reports were filed.

In the absence of Mrs. Saunders, chairman of Revisions, her report was read. It was moved by Mrs. McCain and seconded by Mrs. Hill that delegates to the national convention be instructed to approve the proposed revisions. The motion carried.

A recommendation from the Board was read that a contribution of \$200 be made to the North Carolina Nurses' Association to help defray the cost of printing a pamphlet regarding the recent survey of "Nursing and Nursing Education in North Carolina," if approved by the Medical Society. Mrs. Fleming moved and Mrs. Judd seconded the motion that the recommendation be adopted. The motion carried.

A recommendation from the Board that the Student Loan Fund be increased from \$100 to \$500 was also read. A motion was made by Mrs. Norfleet and seconded by Mrs. McCain that this be approved. The motion carried.

Mrs. E. R. Hipp, councilor to the Southern Medical Auxiliary, was recognized.

Mrs. Johnson introduced Mrs. Mason G. Lawson, third vice president of the Auxiliary to the American Medical Association, who brought greetings and a most interesting message. She emphasized the great need for close cooperation between the National and State Auxiliaries, and reviewed mutual problems of the A.M.A., the Auxiliary, and the public.

Mrs. Lawson reminded us that we are eligible for membership in Auxiliary by virtue of the fact that we are doctors' wives, and that we must work hard in earning our places as wives of medical doctors. She invited attendance at the national meeting.

In response to Mrs. Johnson's call for nominations from the floor for members of the nominating committee, the following were nominated in the order given:

Mrs. M. I. Fleming.....	Fourth District
Mrs. T. B. Brem.....	First District
Mrs. Joseph McGowan.....	Tenth District
Mrs. R. S. Moore.....	Eighth District
Mrs. H. S. Willis.....	Fifth District

A motion was made by Mrs. Lee and seconded by Mrs. Richardson that nominations be closed. Motion carried. Mrs. Judd then moved that the slate be accepted by acclaim and that the secretary be instructed to cast the vote. The motion was seconded by Mrs. Fleming and carried.

Mrs. M. D. Hill, chairman of the Awards Committee, presented the following awards:

(1) The Rachel Davis Cup and check for \$25.00 for highest achievements to Fourth District for the third consecutive time (cup to be kept permanently).

(2) \$5.00 (donated by Mrs. Harry Johnson) to Buncombe County for the largest number of resolutions against government-controlled medicine.

(3) 5.00 (The Annual Thomas Leslie Lee Award) to Edgecombe-Nash for making the greatest effort to combat socialized medicine.

(4) \$5.00 (donated by Mrs. M. I. Fleming) to Edgecombe-Nash for the largest contribution to the Cooper Bed Fund.

(5) \$5.00 (donated by Mrs. J. W. Rose) to Mecklenburg County for the largest increase in membership.

(6) \$5.00 (donated by Mrs. Claude McNeill) to Wayne County for the largest number of subscriptions to **Today's Health**.

Mrs. Robertson, in accepting the Davis Cup as a permanent award for outstanding achievements for three successive years, paid tribute to all who had worked as individuals and as groups to attain this honor.

As a committee to study the feasibility of a House of Delegates for the Auxiliary, Mrs. Johnson appointed the following:

Mrs. W. Reece Berryhill  
Mrs. P. G. Fox  
Mrs. B. W. Roberts

Mrs. Roberts was asked to appoint one other member to the committee.

In the absence of Mrs. Raymond Thompson, chairman of the Nominating Committee, her report listing the proposed new officers was read as follows:

President-Elect—Mrs. J. E. Wright, Macclesfield  
Recording Secretary—

Mrs. H. K. Herrin, Gastonia

A motion was made by Mrs. Fleming and seconded by Mrs. Judd that the slate be accepted as presented. The motion carried.

The officers were installed by Mrs. P. P. McCain, who reminded the entire group that responsibilities for officers of any organization are heav-

ier today, and thus their need for greater help from their co-workers, if they are to perform their duties efficiently.

Mrs. Johnson presented the gavel to Mrs. B. W. Roberts, the incoming president, who expressed appreciation for the responsibility she assumes and pledged to do her utmost to work with and for the Auxiliary.

It was agreed by the group that a telegram of congratulations from the Auxiliary be sent to Dr. Mary Sloop of Crossnore, who is a doctor's wife and who has recently been chosen National Mother of the Year.

There being no further business, the meeting was adjourned.

MRS. CHARLES H. GAY,  
Acting Recording Secretary

#### Memorial Service

Mrs. G. Westbrook Murphy

#### MY HEREAFTER

By Juanita De Long

Do not come when I am dead  
To sit beside a low green mound,  
Or bring the first gay daffodils  
Because I love them so,  
For I shall not be there.  
You cannot find me there.

I will look up at you from the eyes  
Of little children;  
I will bend to meet you in the swaying boughs  
Of bud-thrilled trees,  
And caress you with the passionate sweep  
Of storm-filled winds;  
I will give you strength in your upward tread  
Of everlasting hills;  
I will cool your tired body in the flow  
Of the limpid river;  
I will warm your work-glorified hands through  
the glow  
Of the winter fire;  
I will soothe you into forgetfulness to the  
Drop, drop of the rain on the roof;  
I will speak to you out of the rhymes  
Of the Masters;  
I will dance with you in the lilt  
Of the violin,  
And make your heart leap with the bursting  
cadence  
Of the organ;  
I will flood your soul with the flaming radiance  
Of the sunrise,  
And bring you peace in the tender rose and gold  
Of the after-sunset.

All these have made me happy;  
They are a part of me;  
I shall become a part of them.

Since our meeting last May in 1950, we have lost six friends and loved ones who were members of the Auxiliary to the Medical Society of the State of North Carolina. They are:

Mrs. Joseph Elliott—Charlotte  
Mrs. William Todd Ferneyhough—Reidsville  
Mrs. J. W. Huston—Asheville  
Mrs. Addie Guy Quickel—Gastonia  
Mrs. Margaretta Yoder Rhyne—Gastonia  
Mrs. W. M. White—Lenoir

Two of this number, Mrs. Joseph Elliott and Mrs. J. W. Huston, were past presidents of this Auxiliary. We would also pause to honor Dr. George Cooper, in whose memory our Auxiliary maintains a bed in the sanatorium at Wilson.

Mrs. Elliott was Memorials chairman in 1945,



and it seems most appropriate that we should stand and voice the same prayer which she offered on that occasion:

"Oh God, our Father, Thou who art the Giver of the earthly life and of the eternal, Thou hast blest us by fellowships of love. These, whom thou takest away from us for a little while, are still ours to love and remember. We thank Thee for the beauty and goodness of their lives. May we too, be a blessing to the world. Deepen our faith, we pray, for Thy Son's sake." Amen.

### Report of the President

To get a true picture of Auxiliary work done this past year, it would be necessary for you not only to read all of the wonderful reports which came to me, but also to read between the lines of those reports in order to realize the enthusiasm and cooperation that we found so evident. I hope that you will read every word of each report when they appear in the September issue of the *North Carolina Medical Journal*.

As your president, I have tried to carry out duties as they came to me.

After all vacancies on the Board were filled, a complete list of the officers, chairmen, councilors, and county presidents was sent to the office of the State Medical Society in Raleigh, our national Auxiliary office, and our state and national public relations offices. Stationery and yearbooks were prepared for printing.

Early in September, letters and instructions were sent to the State Board members and county presidents. Each was also furnished with copies of our constitution and by-laws, the Yearbook and the national Handbook, all of which we have asked them to pass on, with their records, to their successors at the end of the year.

A successful Board meeting was held at the home of Dr. and Mrs. H. Stuart Willis in McCain on September 26. Officers and councilors gave excellent instructions regarding their various responsibilities. The annual reports show that many of these suggestions were carried out.

We were especially honored at this meeting to have present five representatives of the State Medical Society: Dr. Roscoe D. McMillan, president; Dr. Willis, our host; Mr. James T. Barnes, executive secretary; Mr. LeRoy Cox, director of public relations; and Dr. Rachel Davis, our councilor, to whom we are deeply indebted for encouragement and council, as well as for her generous annual award.

Auxiliaries were urged this year to elect officers early enough in the spring so the names of those elected could be sent in before the annual meeting. Having these names will aid the new officers in getting out your material much earlier. The response to this request has been gratifying.

Your work in the field of public relations has been outstanding. According to your reports, at least 387 organizations sent signed resolutions against compulsory health plans to congressmen and others. This does not include Buncombe county, which distributed over 200, (fifteen of which said they could not sign.) If the remainder sent theirs in it would bring the number to 572. This bespeaks wonderful alertness to this problem. Your work in education for voluntary health plans has been commendable also. I must mention Edgecombe-Nash, whose members were responsible for distributing 2,000 pieces of educational literature through barber shops, beauty shops, rural stores, bus and train terminals, and elsewhere.

The fact that 149 additional copies of Filde's picture, "The Doctor," were placed in reception rooms and elsewhere, shows your interest in patient-doctor relationships.

Your participation in almost forty different forms of public service shows that you are taking your places as leaders in your communities.

One big regret is that we have not availed ourselves sufficiently of the educational value of *Today's Health*. It was reported as going to only thirty-five school libraries through the efforts of Auxiliary members. We must improve on this record. Wayne county must be recognized at this time for receiving the national award—an excellent set of educational records—for the seventy-eight subscriptions which they sent in.

Interest in nurse recruitment continues, with three counties and the past presidents offering scholarships in this field.

It was my pleasure to represent you at the annual meeting of the Southern Medical Auxiliary, and, while there, to learn that North Carolina was awarded second place for gifts to the Jane Todd Crawford Memorial Fund, and third place for Doctors' Day activities.

I attended the state meeting of the American Cancer Society in Durham in October, and brought greetings to the Eighth District meeting in Asheville in March. I was pleased to note the fine cooperation between the Cancer Society and the medical profession.

Since it was possible for me to attend only a portion of the Fourth Annual Public Relations Conference in Raleigh, I am very grateful to Mr. LeRoy Cox for a transcript of the proceedings.

At the invitation of Mr. Russell Grumman, state president of the North Carolina Congress of Parents and Teachers, I attended several of their sessions at the annual meeting in Winston-Salem. Again it was a pleasure to see many doctors' wives, as it was to see them in so many different groups during the year.

It was my privilege to represent the North Carolina Auxiliary on a panel discussion on Organization when I attended the National Board Meeting. I found the two days spent there full of inspiration.

My day at the New Hanover County Medical Symposium at Wrightsville Beach in August was delightful.

During the year I addressed the meetings of three district auxiliaries (Second, Third, and Eighth), and ten county auxiliaries (Catawba, Mecklenburg, Wayne, Johnston, Cumberland, Forsyth, Guilford, Surry and Wilkes-Alleghany). A talk was made also before a combined meeting of Watauga-Ashe doctors and their wives. I am pleased to recognize this group as our newest auxiliary. We are also glad to welcome Catawba and Sampson, who have organized since our meeting last May. We regret the loss of Richmond and Davidson.

It was my unique experience to talk before a group of medical students' wives in Chapel Hill. I found them quite eager to become good Auxiliary members when they become eligible.

Greetings have been sent to our guests in the sanatoria beds. May I say here that the letters of gratitude to the Auxiliary which have come to me show how worthy this phase of our work is?

For the first time in the history of the Auxiliary we have been honored by the Medical Society by being asked to give a report of our year's activities. As your president, I gave this report yesterday to the House of Delegates. Cooperation between the Medical Society and the Auxiliary has been all that could be desired. We are indeed grateful to the Society for their encouragement and assistance.

It has been a very busy year. Four articles have been written for the *Journal*, and some assistance has been given in getting out the three issues of

the **Bulletin**. More than 400 letters have been written, not including those which were mimeographed. Over 4,800 miles have been covered in the interest of Auxiliary work, including trips to the Board meeting in Chicago and to the meeting of the Southern Medical Auxiliary in St. Louis.

The year has been full of privileges that would not have been mine if you had not entrusted me with this office. Friendships have been made that will be cherished always.

My sincere wish is that this year may prove to be a strong link between the activity of the past and the progress of the future; and that, as I come to the end of my year as president, instead of "just fading away," I shall be a more valuable member of the Auxiliary because of my experiences.

MRS. HARRY L. JOHNSON.

#### Report of the President-Elect

As president-elect I wish to submit the following report: I attended the fall Board meeting at the home of Mrs. Stuart Willis on September 26, 1950. I have taken an active part in my own county auxiliary and in as many health drives in Durham for the current year as possible.

I have made all committee appointments for next year so that members may come to this meeting, talk with their predecessors, and get help and inspiration before beginning their work.

I am grateful to Mrs. Harry Johnson for the help she has given me in preparing myself for the responsibility I am about to assume.

I have read and studied all the material sent to me, and have tried to familiarize myself with the workings of the state and national Auxiliaries in order to do a competent job as your president.

MRS. B. W. ROBERTS.

#### Report of the First Vice President and Chairman of Organization

In September I attended the fall Board meeting at McCain. At this time I met with the councilors present for a brief session during the luncheon hour. We not only discussed organizing new auxiliaries, but stressed better organization where we already have units. In the districts which had not been accustomed to having district meetings, the councilors were asked to make every effort to have one during the year—preferably when the men had theirs. They were asked to visit, whenever possible, in the counties, and to try to get more county auxiliaries to issue yearbooks. From all reports, I believe these plans were carried out in many instances.

I attended two district meetings—one as guest speaker. I regretted not being able to attend two other district meetings to which I was invited. I attended all but one of our local auxiliary meetings, and visited one other county auxiliary at the fall meeting.

I made two maps—one for national Auxiliary and one for my files—showing the organization of the state. (Similar maps were sent to each councilor for her files last year.) A glance at this map will show where organization is needed; where we have members-at-large, and how many; where the State Medical Society has county societies, and how many doctors are in each county. I regret that at the end of the year I must change this map to show the loss of two county auxiliaries—Richmond and Davidson. However, I am delighted that we can remove the red dot from Watauga, Ashe, and Sampson Counties. Catawba was organized by my predecessor, Mrs. Raymond Thompson, right after our State meeting last May. We want to welcome these fine groups into the "fold."

I have worked closely with Mrs. Lounsbury in the Third District, and have tried to organize Du-

plin and Onslow Counties. I believe we will have these two to welcome into the "fold" by next May.

May I take this opportunity to thank each councilor for her fine work in making this organization report possible? It has been a distinct pleasure to work with them.

I would like to recommend that a copy of the treasurer's report to the National Auxiliary be sent to the organization chairman before time for her report in order that the reports might tally.

MRS. THOMAS LESLIE LEE

#### Reports of the Councilors

##### First District

No report.

##### Second District

A statistical report of activities in the Second District for the past year would be an inadequate measuring rod for what has been accomplished. Figures are not necessarily cold, but they could not possibly tell the story of warm human relations that has been outstanding in the program of work carried out by the six auxiliary units during 1950-1951.

Since there were no further organizational possibilities, as councilor I set the following specific goals at the beginning of the year—attendance by as many county presidents as possible at the fall Board meeting in McCain; a worth-while and meaningful district meeting; a personal visit to each organized unit; and complete cooperation in the task assigned by the Public Relations Department of the State Medical Society concerning voluntary health programs. All these goals have been met. The results, though not 100 per cent in each case, have been very satisfactory.

At the fall Board meeting in McCain we had, in addition to the councilor, two county presidents attending—Mrs. E. C. Richardson, Jr., from Craven, and Mrs. Henry Temple from Lenoir. Those counties have benefited much from their informed and inspired leadership.

The district meeting, held in Morehead City on October 18, was outstanding. Our state president, Mrs. Harry Johnson, was the guest speaker. Present and contributing to the program also were Mrs. Leslie Lee, first vice president, Mrs. J. C. Peele, second vice president, and Dr. Rachel Davis, chairman of the Medical Society Advisory Board. It was easy to see why all delegates were fired with enthusiasm and determination to make this year a good one.

As district councilor, I had the happy privilege of attending meetings of all county auxiliaries. I tried to share with them my zeal for the bigness of our mutual task, and they gave whole-hearted cooperation in working out the purposes and plans of our organization.

District activities in the voluntary health program had a particularly wide reach. The fifteen resolutions against government medical care which were reported were only one phase of the work done. Carteret presented our state president to speak before a woman's club in Morehead City, and Tri-County arranged for the councilor to present the subject before the Williamston P.-T.A. Quite a number of other civic groups all over the district were furnished with speakers and given pertinent information.

The financial totals which follow, attest to the fact that the Auxiliaries concentrated on the Cooper Bed as requested.

Cooper Bed .....	\$165.85
Stevens Bed .....	10.00
Student Loan Fund .....	30.00
Jane Todd Crawford Memorial .....	5.00
Cancer Drive .....	12.00



Other figures are: a total paid membership of 103 out of an eligibility list of 135; 27 copies of "The Doctor" hung in offices; 40 subscriptions to **Today's Health**; five auxiliaries observed Doctor's Day by sending red carnations to each doctor and also by entertaining at social functions of various kinds.

Lenoir County deserves special mention. All the counties — Beaufort, Carteret, Craven, Pitt, and Martin-Washington-Tyrrell — have participated to a limited degree in most of the activities suggested by the state chairmen, but Lenoir, as usual, has left no phase of the work unattended.

Serving as councilor for the Second District has been a richly rewarding experience for me; and I wish for my successor, Mrs. E. C. Richardson, Jr., of New Bern, the same joy that has been mine.

MRS. BEN F. ROYAL

### Third District

There are eight counties in the Third District. One auxiliary is a tri-county organization, including New Hanover, Brunswick, and Pender. Columbus County has been organized a year, and Sampson County was reorganized in April, 1951.

Of the other three counties, two—Onslow and Duplin—lack enough people with sufficient enthusiasm to organize at this time. Onslow County plans a tentative social meeting during the summer of 1951. Bladen County was not approached this year.

New Hanover County has a paid membership of 47, and has held seven meetings, of which six were program meetings following state suggestions. During the year, observance of Doctors' Day was inaugurated in this auxiliary. A carnation was placed on each doctor's desk, and a fine editorial appeared in the **Wilmington Star**. On October 17 the members of the Columbus County Auxiliary were guests of New Hanover County at a luncheon, at which our state president, Mrs. Harry L. Johnson, was guest speaker.

The New Hanover County Auxiliary took an active part in assisting with the fourth annual symposium sponsored by the medical society in August, 1950, at Wrightsville Beach. This is a project for which there is much thought and planning, and more of the members participate than at any other time.

The New Hanover County Auxiliary this year donated \$92.00 to the Cooper Bed Endowment. **Coronet** magazine was sent to the patient in each of the Auxiliary-supported tuberculosis beds.

Columbus County Auxiliary, with its 13 very active members, has a splendid record. There have been monthly program meetings. One was a luncheon to which the New Hanover County Auxiliary was invited and at which Dr. Elizabeth Kemble, Dean of Nurses at the University of North Carolina's new School of Nursing, was guest speaker. Two of the Columbus County program meetings had as the subject "Socialized Medicine." Forty-four resolutions against government-controlled medicine were sent from civic clubs and other organizations, and a speaker was procured to talk with civic organizations about voluntary health insurance versus compulsory health insurance. Interest in Auxiliary doings, and attendance at meetings have been above average. The Third District salutes the Columbus County Auxiliary!

Our eyes are now focusing on newly reorganized Sampson County. There is much enthusiasm, and we look for great things from them. Good luck Sampson County!

Both Onslow and Duplin Counties have several enthusiasts desirous of organizing. We wish success by May, 1952, to Mrs. John P. Henderson of Jacksonville, and Mrs. G. V. Gooding of Kenansville.

In closing, I wish to suggest that in certain loosely-knit areas with few, and possibly some disinterested, eligible members, some plan be considered whereby medical auxiliaries may be organized as bi-county auxiliaries, regardless of the fact that component medical societies are separate. In this way persons actively interested could be made useful.

MRS. JAMES B. LOUNSBURY

### Fourth District

The Fourth District — composed of Edgecombe-Nash, Greene, Halifax, Johnston, Northampton, Wayne and Wilson Counties—had 151 paid members and one unorganized county—Warren.

I attended five county meetings and made personal contacts with four county presidents, displaying the Davis Cup on each visit. An inspirational district meeting and luncheon was held November 15, 1950, in Rocky Mount, with 42 attending. The year's plan of work was outlined. Guest speaker was Mrs. Thomas Leslie Lee.

Meeting quarterly, all counties followed the state program, with special emphasis on the A.M.A. Educational Campaign for Voluntary Health Insurance.

Edgecombe-Nash led the district, with 52 resolutions sent in and 39 copies of "The Doctor" hung in physicians' offices. A speaker's bureau, providing speakers to various organizations, was set up. Over 2,000 pamphlets from Whitaker and Baxter were distributed in meetings and in barber shops, beauty shops, country stores, shoe shops, white and Negro physicians' offices, and railway and bus terminals. Each county in the district featured such speakers as Mr. LeRoy Cox, Mr. James T. Barnes, and Mrs. Harry L. Johnson. District totals were 116 resolutions, 101 copies of "The Doctor," and over 3,000 pamphlets distributed.

Johnston and Edgecombe-Nash units published attractive news letters quarterly. An informative yearbook was edited by Wayne.

Wayne County's 100 per cent membership (42), directed by Mrs. C. R. Brown, led the state with 78 subscriptions to **Today's Health** to win an award in the national contest—the only county in the state to receive national recognition. They were awarded a set of twelve dramatized health stories (thirty-six recordings). These recordings are being used in local schools and club meetings to further health education. Twenty-one resolutions were sent in, and 15 copies of "The Doctor" were hung. Two books were presented to the Doctors' Library on Doctors' Day, and boutonnieres given each doctor.

The Halifax-Northampton Auxiliary of 21 members secured 30 resolutions and framed 25 copies of "The Doctor." They continued their excellent library work in the Roanoke Rapids Hospital. Magazines and books were daily carried by cart into patients' rooms. Mrs. R. B. Blowe was president.

Greene County, with 100 per cent membership of five members, continued organizational work, with Mrs. W. W. Whittington as president.

Wilson County's 29 members, led by Mrs. C. E. Simons, held a party for new student nurses. Doctors' Day was observed with a dinner party at the County Club.

As president of Johnston County Auxiliary, Mrs. E. S. Grady led 21 members to raise \$300 for their annual Nurse's Scholarship. Twelve resolutions were sent in, and 12 pictures hung. Their outstanding Doctors' Day observance included an excellent editorial in the county paper, and a festive dinner party with a guest speaker and music.

The Edgecombe-Nash Auxiliary of 33 members (Mrs. Thomas B. Suiter, Jr., president), had an outstanding year in public relations and the A.M.A. Educational Campaign, and contributed \$225 to the



Cooper Bed Fund. An afternoon tea last June honored graduating student nurses and high school girls interested in nursing.

All counties remembered the Cooper Bed guest with numerous gifts and visits. The sum of \$467.50 was donated to this Endowment Fund by the district as a whole. As community leaders, auxiliary members promoted better public relations between the medical profession and the public, and were directors of many types of drives and campaigns.

MRS. LEON W. ROBERTSON

#### Fifth District

As councilor for the Fifth District, I regret to state that Chatham County is still unorganized, that Richmond County has been inactive this year, and that Lee County Auxiliary met once and collected dues, but has had no other meetings. The work done in the remaining five counties, however, leaves nothing to be desired.

There was an increase in paid memberships and an increase in donations to the Cooper Bed Fund, the Student Loan Fund, Sanatoria Fund, and the Jane Todd Crawford Memorial Fund.

These counties have worked actively with the A.M.A. Educational Campaign for voluntary health insurance. They have sent in resolutions against government-controlled medical care; have fittingly observed Doctors' Day, and have participated in all drives—supplying chairmen for many drives. Three counties took part in the nurse recruitment campaign, and all have worked to promote good public relations between the medical profession and the public.

Special projects of five county auxiliaries are as follows: Moore County, as you know, year after year entertains the State Auxiliary.

Cumberland County Auxiliary entertained the Tri-State meeting in Fayetteville, and has helped at the Veterans Hospital there.

Harnett County Auxiliary furnished free lunches to school children.

Hoke County Auxiliary entertained the Executive Board of the Auxiliary at the fall meeting, and entertained at bridge the wives of doctors attending the Fifth District meeting at McCain in March.

Robeson County complimented nurses of the two units of the Robeson Memorial Hospital at a tea to which representatives of all civic organizations were invited, and at which Mr. LeRoy Cox was the guest speaker.

Scotland County Auxiliary entertained at bridge the wives of doctors attending the Fifth District meeting in Laurinburg in December, and conducted the visiting ladies on a tour of the new hospital in Laurinburg.

Meeting with various groups during the past three years has been most pleasant. I have been greatly impressed by the scope of work done and am sure that interest and enthusiasm will grow increasingly strong under the able leadership of Mrs. R. D. Croom of Maxton.

MRS. H. STUART WILLIS

#### Sixth District

The Alamance-Caswell Auxiliary has a paid membership of 22, with 47 eligible for membership. They have had several social meetings.

The Durham-Orange Auxiliary, with Mrs. Max Schiebel as president, has a paid membership of 111, an increase of nine over last year. There are 125 eligible for membership. The auxiliary contributed to the three bed funds and the Student Loan Fund. Gifts were sent at Christmas time to the three guests in our sanatoria beds. Members were active in numerous drives, such as the Diabetic Detection Week, and cooperated with the Red Cross Blood Mobile Unit. The first fall meeting was held at the Hope Valley Country Club in Durham, with Dr. C.

Sylvester Green speaking on the Medical Foundation. There was a joint dinner meeting with the medical society in December. The spring meeting was held in April at the home of Mrs. Gordon Gray in Chapel Hill. New officers were elected at that time. For Doctors' Day, there was an appropriate editorial in the Durham paper.

The Wake County Auxiliary, with Mrs. A. L. Chesson as president, did an outstanding job this year, as usual. It has a paid membership of 95 out of 103 eligible. The group contributed to the Stevens and Cooper Bed Funds, Student Loan Fund, and Jane Todd Crawford Memorial Fund. They gave a \$70.00 Nurse's Scholarship and donated 5 subscriptions to *Today's Health* to local high schools. They had an advisory committee of three members from the county medical society. There were chairmen to correspond to the state chairmen. For Doctors' Day the auxiliary had an informal barbecue supper honoring the doctors, and a "spot announcement" honoring doctors was given over station WPTF. The members worked individually on all drives, and, as a unit, assisted the Draft Board and offered their service to the Civil Defense Council. Members assisted in addressing notices to doctors regarding registration. Members were appointed to serve on the Raleigh Civic Council. One call meeting and nine monthly meetings were held, with a number of guest speakers. The high light of the year was the Silver Anniversary Dinner celebrating their twenty-fifth year of organization, with the doctors as special guests. The group has undertaken a program of educating the public through women's groups, regarding the hazards of a socialized government control of medicine. A survey was made of all women's clubs in the city and county. Each member was asked to check the clubs through which she might make a contact "via the friendship line." Educational materials were distributed, and it is hoped that those contacted will see the advantages of a voluntary health program. Resolutions opposing government medicine were sent to suggested persons, and acknowledgments received. Mrs. M. D. Hill edited a lovely yearbook, which I hope all of you will have the opportunity of seeing.

MRS. W. P. RICHARDSON

#### Seventh District

There are ten counties in the Seventh District, only two of which have auxiliaries. Gaston and Mecklenburg have very active organizations and carry on a consistent program, following the general lines of the state program. Both auxiliaries hold regular meetings except during the summer months. The two groups held one joint meeting when the Mecklenburg group invited the Gaston Auxiliary to meet with them in February. Dr. V. K. Hart spoke to the assemblage on the Voluntary Health Program of the Medical Society of the State of North Carolina.

Mecklenburg Auxiliary, with a membership of 149, held eight regular meetings—dutch luncheons—with programs of interest. Mrs. Harry L. Johnson, state president addressed this group on "The Auxiliary—Aims, Meaning, Projects." Other program topics were "Good Government is Good Politics," the Voluntary Health Program, a review of the book *The White Witch Doctor*, and a program on the Alexander Home, a Charlotte institution. This group gave a Christmas party for the doctors and a tea for new doctors' wives. They had a spring picnic in May, and climaxed their programs by the joint meeting with the Gaston Auxiliary. The Mecklenburg group is very active in civic affairs—especially those whose programs lie in the field of health—namely, the Red Cross, the heart and cancer programs, the Bloodmobile, T.B. Seals Sale, the March of Dimes, Community Chest, Y.W.C.A., and others. They work actively in hospital auxil-



aries, hospital guilds, Gray Ladies, and serve as nurses' aides. Their public relations are carried on through their many personal contacts, and by newspaper stories and pictures.

The Gaston Auxiliary with a membership of 41, held nine regular meetings. These meetings were held in the homes of members, and were generally well attended and interesting. Some of their program topics were: Problems of Nurses and of Nursing Schools; formation of Nurses' Aide groups, "What Socialized Medicine will Mean to the Individual," Civil Defense (for doctors' wives), Health Insurance, a review of *The Road Ahead* by John T. Flynn, and two films on cancer detection. This auxiliary twice annually entertains the doctors—at Christmas and on Doctors' Day—and once a year the doctors entertain the wives. These gatherings promote good relationships within the group. On Doctors' Day this year business firms sent floral tributes to the doctors—for the first time—indicative of good public relations. Both auxiliaries in this district contribute to the Stevens and Cooper Bed Funds, the Student Loan Fund, and the Jane Todd Crawford Memorial Fund.

Since these two groups do such splendid work, it has long been the desire of the councilors to interest other counties in organization. To this end, on the occasion of the district medical meeting which was held in Gastonia on December 7, 1950, a special invitation to this meeting was sent by the councilor to each doctor's wife in the Seventh District. No doctor's wife from an unorganized county responded to this invitation. We hope that the fact that the meeting was held late in the year accounted for this failure.

At the dinner meetings of the District Society, the councilor was permitted to present the work of the Auxiliary. The sponsorship and approval of organization in unorganized counties was requested. This approval was given by means of a formal motion from the floor, which was passed without a dissenting vote. On the strength of this official approval, it is hoped that further organization may come.

MRS. R. S. CLINTON

#### Eighth District

The Eighth District includes eleven counties, with six organized auxiliaries. These are Guilford, Rockingham, Surry-Yadkin, Wilkes-Alleghany, Forsyth, and Watauga-Ashe. Watauga-Ashe has recently organized. They have a membership of eight, and Mrs. R. H. Harmon of Boone is the organizing chairman. This leaves only one county in the district—Randolph—unorganized. It disbanded several years ago.

Guilford County Auxiliary has a membership of 104. They sent \$75.00 to the Cooper Bed Fund and had four interesting meetings. Doctors' Day was observed with a dinner-dance. At Christmas, they presented the Guilford County Sanatorium with two metal bridge tables and eight chairs. They also sent each guest on the Sanatoria beds a check for \$15.00.

Rockingham Auxiliary has 22 members, who meet with the medical society and share their programs. They placed flowers in the doctors' offices on Doctors' Day. They concentrated their greatest effort this year against government-controlled medicine.

The Surry-Yadkin Auxiliary has 15 members. They contributed to the various funds and observed Doctors' Day by sending a carnation to each doctor. Their work with various organizations in securing resolutions against government-controlled medicine was their outstanding achievement of the year. In October, they served with the Medical Society as hosts to the Eighth District.

The Wilkes-Alleghany Auxiliary has 14 members. On Doctors' Day each doctor was sent a boutonniere and that evening was entertained with a dinner party. On April 19, the auxiliary assisted

the medical society in entertaining the Eighth District. Although their group is small, each member has been most cooperative in helping to foster good will between their own members and the public in general.

Forsyth, which also includes a small number from Stokes, has 102 members. They contributed \$150.00 to the Stevens and Cooper Bed Fund, and \$60 to the Student Loan Fund. They had four interesting business meetings and two social meetings during the year. There has been an increased interest and attendance at all meetings: an average of 70 attended the business luncheon meetings. Forty-three subscriptions to the *Bulletin* were sold—which we believe is an unequalled record. Members also sold 28 subscriptions to *Today's Health*.

We are extremely proud of our new Watauga-Ashe Auxiliary and are looking for a good report from them next year.

On October 26, the first Eighth District business meeting of the auxiliary was held in Elkin. Approximately 30 were present, including representatives from virtually every county. Mrs. Harry Johnson was present and gave an interesting discussion, after which the ladies joined their husbands for a delightful social hour and dinner.

MRS. W. L. KIRBY

#### Ninth District

There are five organized counties in the Ninth District—Catawba, Rowan-Davie, Iredell-Alexander, Burke, and Caldwell. We lost one organized county this year—Davidson. There are 197 eligible doctors' wives in the district, with 170 paid members.

Four auxiliaries contributed a total of \$51.00 to the Stevens Bed Fund; three contributed \$18.00 to the Student Loan Fund. One contributed \$10.00 to the Sanatoria Bed Fund, and four gave \$14.50 to the Jane Todd Crawford Memorial Fund. Sixty-seven subscriptions to *Today's Health* were obtained. Four of the five auxiliaries have an Advisory Committee from their county medical society.

Good public relations between the medical profession and the public have been promoted in this district by sponsoring editorials; talking with lay people; helping in diabetic control; providing good Doctors' Day publicity; acting as hostesses at the opening of the new Caldwell Hospital; participating in community health drives; furnishing the Burke County Bookmobile.

The Burke County Auxiliary established a student loan fund to be used at Grace Hospital, Morganton. Rowan-Davie Auxiliary furnished a playroom for the new pediatric addition to the hospital. Burke County Auxiliary took care of incidental expenses and some new clothes for a worthy Negro student nurse. All the auxiliaries generated keener interest in legislative matters. Mr. LeRoy Cox, director of public relations for the State Medical Society, spoke at two different women's club meetings in Iredell-Alexander Counties. Each auxiliary in this district had as many as four and a maximum of nine meetings during the year. All five branches celebrated Doctors' Day—four with dinners and programs, one with a barbecue, and all with editorials and boutonnieres.

MRS. A. M. LANG

#### Tenth District

The Tenth District is composed of fourteen counties; Buncombe County is the only one with an organized auxiliary.

We had seven meetings this past year, one of which was a picnic for our husbands at Enka Lake.

Our 103 members have worked enthusiastically on the following projects: helped in the Tenth District Symposium in October, 1950, by entertaining seventy-five doctor's wives at a luncheon at the Asheville Country Club; worked regularly in the



Red Cross Blood Bank, the Cancer Clinic, and the Buncombe County Medical Library; made posters for the radio program, "This is Your Doctor," and delivered them to thirty-three drug stores; distributed resolutions against government-controlled medicine to 203 clubs; sponsored the Heart Fund Drive and raised \$1,427.00 for it; presented the Dr. Martin L. Stevens Memorial Plaque for the Stevens bed at the Western North Carolina Sanatorium; observed Doctors' Day by serving our husbands their favorite foods, presenting them with a copy of the Doctors' Creed and with original poems appropriate to their hobby, personality, and specialty.

IMOGENE BELLAMY MOORE

#### Report of the Second Vice President and Chairman of Activities

Auxiliary activities during the year have been under the leadership of four very splendid co-chairmen. The purpose of this report is to summarize a few facts regarding the occupants of our three Sanatoria Beds and the promotion of our Bed Endowment Funds and the Student Loan Fund.

Mrs. Charles M. Norfleet, chairman of the Student Loan Fund, has made every effort to boost the fund this year and reports contributions from sixteen county auxiliaries. Mrs. Norfleet also reports that early last fall a committee was appointed to work out the details of a possible revision of the By-laws with regard to the Student Loan Fund in order to make the Fund more usable. This proposed revision will be presented in the report of the Revisions chairman. No request for a loan has been received during the year.

Mrs. G. M. Billings, chairman of the Stevens Bed, reports that in the early fall Mrs. W. C. Ramsey of Boone, a graduate of the Duke University School of Nursing, was admitted to Western North Carolina Sanatorium as our Stevens Bed guest. Mrs. Ramsey has been delighted with the many gifts, the money, and the cards which she has received.

Mrs. Ramsey made considerable progress during her stay in the Stevens Bed. She has been moved to first floor, and hopes to be getting up soon.

About February 1, Dr. James Donnelly of Winston-Salem became ill and entered the hospital. Since doctors are given priority as patients in our sanatoria beds, he became our Stevens Bed guest. He will be in bed for six months or more.

Mrs. M. I. Fleming, chairman of the Cooper Bed, reports that the year's work has been very gratifying. Dr. H. E. Brooks of Clayton, guest in the Cooper Bed since April 20, 1949, was discharged March 21, 1951. Dr. Brooks made a visit to Mrs. Fleming's home to express his thanks for the encouragement and help the Auxiliary had given him in his battle to get well. After a visit of several weeks with his mother, Dr. Brooks expects to return to Eastern North Carolina Sanatorium to assist in whatever way he is able.

In her report, Mrs. Fleming expressed the regret of us all at the death of Dr. George M. Cooper on December 18, 1950. Mrs. Fleming also included a few of the many tributes that came from over the state to the man in whose honor our bed at Eastern North Carolina Sanatorium is named.

Mrs. Milton Clark, chairman of the McCain Bed, reports that Dr. Paul Toms of Salisbury, who has been our guest since January 18, 1950, was discharged from the hospital early in March. Dr. Toms expressed to Mrs. Clark his deep gratitude to the Auxiliary for the use of the McCain Bed, thus relieving him of the financial worry of a long hospitalization. He is now recuperating in Florida prior to resuming his practice of medicine.

Mrs. Mildred Kea Furrage, a registered nurse at the Sanatorium, is now the occupant of the Mc-

Cain Bed. She is 26 years of age, and this is her second period of hospitalization.

Last fall, at the suggestion of our president, Mrs. Clark devised a plan for providing year-round remembrances to the McCain Bed patient, instead of having many gifts arrive at one time, as at Christmas or special holidays. Mrs. Clark established a schedule, assigning a certain month to each county auxiliary for sending a remembrance. During the month prior to the time for sending a remembrance, the Bed chairman notifies the county auxiliary of the name of the occupant (to provide for a possible change) and includes helpful information and suggestions. This plan has proved very satisfactory for both the patient and the county auxiliary.

The financial status of our Bed Endowments and the Student Loan Fund will be given in the treasurer's report. The members of the Activities Committee have made an effort to promote our financial program, particularly by means of correspondence and talks to county and district groups.

I would like to express my sincere thanks to the three Bed chairmen, the Student Loan chairman, and each county auxiliary for the cooperation and support you have given to this phase of our auxiliary work during the past year.

MRS. J. C. PEELE

#### McCain Bed Chairman

Dr. Paul Toms, occupant of the McCain Bed since January 18, 1950, was discharged March 10, 1951, with his disease under control, to continue the cure at home before resuming practice.

Mrs. Mildred Kea Furrage was suggested by Mrs. Willis and the Medical Staff as the new occupant of the McCain Bed. Mrs. Furrage is a registered nurse. She has been a member of the North Carolina Sanatorium nursing staff for several years. She is a very fine person, an attentive nurse and a hard worker.

At the suggestion of Mrs. Harry L. Johnson, our president, a plan was worked out for year-round remembrances to the occupant of the McCain Bed.

The president of every Auxiliary was sent a letter explaining the schedule, and assigning a certain month for each auxiliary to send a gift.

The McCain Bed chairman will again write each president in advance of her month, and will include any helpful suggestions or information that may be necessary.

Some counties are included in an unassigned list. These will be called upon to fill in, or for special services, depending upon a possible change in occupants.

MRS. MILTON S. CLARK

#### Stevens Bed Chairman

I would like to submit my report of the Stevens Bed for the year 1950-1951.

Our patient last fall was Mrs. A. W. Ramsey, who is a graduate of Duke University School of Nursing. She is married, and has two children, who are with her mother in Boone.

We followed our usual procedure of sending holiday cards and remembering our patients at Christmas. This year the organizations were unusually generous, and Mrs. Ramsey was delighted with the many nice gifts and the money that were sent.

About the first of February, Dr. James Donnelly of Winston-Salem became ill and entered the hospital. Dr. Donnelly is now occupying the Stevens Bed. Doctors are always given the first choice in a bed occupancy. He will be in bed six months or more. Dr. Thomas says that he is doing nicely at present.

I had hoped that the Stevens Bed Endowment



Fund would go over the top this year, but so far we have not quite made the goal. The financial report will come from the treasurer.

MRS. G. M. BILLING

#### Cooper Bed Chairman

The year's work has been very gratifying. Dr. H. E. Brooks, guest in the Cooper Bed, was admitted April 20, 1949, and was discharged March 21, 1951. During this time it was necessary for him to undergo, at Duke Hospital, an operation which proved successful. Dr. Brooks is visiting his mother at present and, after a month or so, expects to return to the Sanatorium to assist in whatever way he is able.

This is what Dr. Eason wrote in the letter telling me of Dr. Brooks' discharge:

"Dr. Brooks' stay with us was made much brighter by the interest shown in him by the medical auxiliary and its individual members, and of course, that also made our job of helping him get well much easier."

Dr. Brooks called by my home to thank me for all the encouragement and help we had given him in his battle to get well.

I want to take this opportunity to thank all the auxiliaries for their help this year, as you will see by our state treasurer's report how fine it has been. Let's keep up this grand work, and we will reach our goal before we realize it.

It is my great sorrow to have to embody in this report the notice of Dr. George M. Cooper's passing on December 18, 1950.

The following tribute was paid Dr. George M. Cooper by an associate—Dr. J. W. R. Norton, Secretary and State Health Officer:

"North Carolina has lost its greatest Public Health Official of all time. He served longer, engaged in more activities and did more to make North Carolina Public Health conscious and to minister to its Public Health needs than any man in the history of the State. He pioneered more Public Health services than any other man I know, not only in North Carolina but in the nation. Both personally and professionally he had few peers, if any, and no superiors anywhere. His was constantly an up-hill fight against ignorance, misinformation, indifference and short-sighted selfish interests. The two greatest groups of his beneficiaries were under-privileged mothers and children, in whose behalf he not only worked unceasingly and for whose relief he was instrumental in securing millions of dollars in public funds, which he administered where they would do the most good among the greatest number of people. During his service with the State Board of Health, the maternal death rate was reduced to one-fourth and the infant death rate to one-half of those rates prevailing in North Carolina when his service began. This progress was due to the work of many devoted physicians and assisting personnel; Dr. Cooper was the patient planner, the dauntless and resourceful leader, the tireless worker.

"I feel in the passing of Dr. Cooper an overwhelming sense of personal loss. In generations to come, the descendants of those he has helped will rise up and call him blessed. His sympathies were broad and he worked tirelessly in behalf of those he sought to serve, and without hope of personal aggrandizement. He was not only a pillar of strength in the Public Health structure, but ever mindful of his family and personal friends and just as zealous in the work of the Presbyterian Church, of which he was a life-long member and a ruling elder at the time of his death. He was my personal friend and the personal friend of all who worked with him in any capacity. Our best expression of faith in and love for him will be through closing ranks and

marching on toward the goals toward which he strove so long and so well."

MRS. M. I. FLEMING

#### Student Loan Fund Chairman

As chairman of the Student Loan Fund, I beg leave to submit the following report for 1950-1951:

The total amount contributed to the fund is \$233.50. (An itemized list of donations is to be filed with this report.)

At the suggestion of the committee appointed at the fall Board meeting, the Revisions Committee has sent a request to amend the present by-law, so that a larger loan, not to exceed \$500 per year to one individual, may be made and voted upon, because we felt that \$100 would be almost no help in these times of higher living costs.

I have received no requests for loans, and there is no money being used from the fund at this time.

I am most grateful to each auxiliary for its response and cooperation, and wish to extend a personal thank you.

MRS. CHARLES M. NORFLEET, JR.

#### Report of the Recording Secretary

The minutes of all meetings have been recorded, and reports filed. Copies of these have been mailed to all board members, committee chairmen, and others.

I wish to express my appreciation to Mrs. Harry Johnson and Mrs. Charles Gay for the wonderful cooperation shown me during my misfortune. I regret that owing to this motor accident, I cannot be with you during this meeting.

MRS. B. L. WOODARD

#### Report of the Corresponding Secretary

I have assisted the president with her correspondence when called upon to do so. I have assisted the publicity chairman in getting the News Letter ready for mailing.

MRS. V. W. TAYLOR, JR.

#### Report of the Treasurer

I hereby submit my report of the treasurer's records for the year 1950-1951. All accounts have been recorded and disbursed according to the By-Laws.

I thank the president, Mrs. Harry L. Johnson, the Executive Board members and the county auxiliary presidents and treasurers for their splendid cooperation in making the treasurer's records the best ever.

Hereto is appended the auditor's report covering, in detail, the activities of the treasurer's office for the past year.

MRS. E. C. JUDD

#### Auditor's Report

Mrs. E. C. Judd, Treasurer  
The Auxiliary to the Medical Society  
of the State of North Carolina  
2108 Woodland Avenue  
Raleigh, North Carolina

Dear Madam:

In accordance with your request, we have examined the books and records of your auxiliary for the period from July 1, 1950, to June 30, 1951, and submit herewith the following statements:

EXHIBIT A—Balance Sheet

EXHIBIT B—Summary of Receipts and Disbursements

Schedule B-1—Receipts and Disbursements—General Expense Fund

Schedule B-2—Receipts and Disbursements—Sanatoria Bed Fund

Schedule B-3—Receipts and Disbursements—McCain Endowment Fund

Schedule B-4—Receipts and Disbursements—  
Martin L. Stevens Endowment  
Fund

Schedule B-5—Receipts and Disbursements—  
George M. Cooper Endowment  
Fund

Schedule B-6—Receipts and Disbursements—  
Student Loan Fund

We inspected the securities on hand and obtained confirmation from the depository in verification of bank balances. Your records were found to be

in excellent condition.

#### Certificate

We certify that, in our opinion, the accompanying statements fairly reflect the financial condition of the Auxiliary at June 30, 1951, and the results from operations for the year then ended, upon the basis of accounting records consistently maintained.

Respectfully submitted,  
R. L. STEELE & CO.  
By: Paul E. Pyles, C.P.A.

#### Exhibit A Balance Sheet As of June 30, 1951

ASSETS	Total	General Expense Fund	Sanatoria Bed Fund	McCaia Endowment Fund	Martin L. Stevens Endowment Fund	George M. Cooper Endowment Fund	Student Loan Fund
Cash in Bank (Exhibit B) .....	\$ 4,156.72	\$931.92	\$245.98	\$ 626.08	\$ 296.92	\$ 833.71	\$1,222.11
Investments:							
U. S. Defense Savings Bonds of 10-1-41 Series F, Ma- ture 12 years from date, Maturity Value .....	\$2,800.00	2,072.00		2,072.00			
U. S. War Savings Bonds of 6-1-43 Series F, Mature 12 years from date, Maturity Value .....	1,500.00	1,110.00		1,110.00			
U. S. War Savings Bonds of 6-1-44 Series F, Mature 12 years from date, Maturity Value .....	500.00	370.00		370.00			
U. S. War Savings Bonds of 9-1-43 Series F, Mature 12 years from date, Maturity Value .....	325.00	240.50			240.50		
U. S. War Savings Bonds of 4-1-45 Series G, 2½% interest payable semi-an- nually .....	1,000.00	1,000.00			1,000.00		
U. S. War Savings Bonds of 6-1-45 Series F, Mature 12 years from date, Maturity Value .....	500.00	370.00		370.00			
U. S. War Savings Bonds of 6-1-45 Series F, Mature 12 years from date, Maturity Value .....	1,000.00	740.00					740.00
U. S. War Savings Bonds of 6-1-47 Series G, 2½% interest payable semi-an- nually .....	1,000.00	1,000.00			1,000.00		
U. S. War Savings Bonds of 6-1-47 Series F, Mature 12 years from date, Maturity Value .....	3,500.00	2,590.00		1,850.00		740.00	
U. S. Savings Bonds of 7-1- 48 Series G 2½% interest payable semi-annually.....	2,000.00	2,000.00			2,000.00		
U. S. Savings Bonds of 2-1- 49 Series G, 2½% interest payable semi-annually .....	2,000.00	2,000.00			2,000.00		
U. S. Savings Bonds of 2-1- 49 Series F, Mature 12 years from date, Maturity Value .....	1,500.00	1,110.00		1,110.00			
U. S. Savings Bonds of 6-1- 49 Series F, Mature 12 years from date, Maturity Value .....	2,000.00	1,480.00		1,480.00			



U. S. Savings Bonds of 7-1-50 Series F, Mature 12 years from date, Maturity Value .....	2,000.00	1,480.00	1,480.00				
U. S. Savings Bonds of 7-1-50 Series G, 2½% interest payable semi-annually .....	2,000.00	2,000.00		2,000.00			
U. S. Savings Bonds of 7-1-50 Series F, Mature 12 years from date, Maturity Value .....	3,000.00	2,220.00			2,220.00		
U. S. Savings Bonds of 6-1-51 Series G, 2½% interest payable semi - annually, Maturity Value .....	1,000.00	1,000.00		1,000.00			
U. S. Savings Bonds of 6-1-51 Series F, Mature 12 years from date, Maturity Value .....	1,000.00	740.00			740.00		
<b>TOTAL ASSETS</b> .....	\$27,679.22	\$931.92	\$245.98	\$10,468.08	\$9,537.42	\$4,533.71	\$1,962.11
<b>TOTAL SURPLUS</b> .....	\$27,679.22	\$931.92	\$245.98	\$10,468.08	\$9,537.42	\$4,533.71	\$1,962.11

**Exhibit B**

**Summary of Receipts and Disbursements**  
**Year ended June 30, 1951**

	<i>Cash Balance 7-1-50</i>	<i>Receipts</i>	<i>Disbursements</i>	<i>Cash Balance 6-30-51</i>
General Expense Fund (Schedule B-1) .....	\$ 767.33	\$2,187.00	\$ 2,022.41	\$ 931.92
Sanatoria Bed Fund (Schedule B-2) .....	608.25	734.00	1,096.27	245.98
Wachovia Checking Account .....	1,375.58	2,921.00	3,118.68	1,177.90
McCain Endowment Fund (Schedule B-3) .....	1,869.00	237.08	1,480.00	626.08
(Wachovia Savings Account)				
Martin L. Stevens Endowment Fund .....	2,539.66	757.26	3,000.00	296.92
(Schedule B-4) (Wachovia Savings Account)				
George M. Cooper Endowment Fund .....	2,422.75	1,370.96	2,960.00	833.71
(Schedule B-5) (Wachovia Savings Account)				
Student Loan Fund (Schedule B-6) .....	973.86	248.25	—	1,222.11
(Wachovia Savings Account)				
<b>TOTAL ALL FUNDS (To Exhibit A)</b> .....	<u>\$9,180.85</u>	<u>\$5,534.55</u>	<u>\$10,558.68</u>	<u>\$4,156.72</u>

**Schedule B-1**

**Receipts and Disbursements**  
**General Expense Fund**  
**Year ended June 30, 1951**

Balance on Deposit—July 1, 1950 .....	\$ 767.33	
<b>Receipts:</b>		
Dues 1950-1951 (1458 members) .....	\$1,458.00	
Dues 1950-1951 (1458 members, (½ to Sanatoria Bed Fund)) ..	729.00	2,187.00
		<u>2,954.33</u>
<b>Disbursements:</b>		
Auditing Fee .....	50.00	
Stationery, Postage, Printing and other Office Expense .....	459.95	
Rent—Safety Deposit Box .....	6.00	
National Dues (1458 members—1 arrears) ..	1,459.00	
Contributions and Gifts .....	47.46	2,022.41
Balance on Deposit June 30, 1951 .....	\$ 931.92	
(Exhibit B)		

**Schedule B-2**

**Receipts and Disbursements**  
**Sanatoria Bed Fund**  
**Year ended June 30, 1951**

Balance on Deposit July 1, 1950 .....	\$ 608.25	
<b>Receipts:</b>		
Dues 1950-51 (1458 members @ \$1.00, ½ to General Fund) .....	\$ 729.00	
Contributions .....	5.00	734.00
		<u>1,342.25</u>
<b>Disbursements:</b>		
N. C. Sanatorium .....	182.50	
Western N. C. Sanatorium .....	186.28	
Eastern N. C. Sanatorium .....	177.41	
Transferred to McCain Endowment Fund—		
Schedule B-3 .....	183.36	
Transferred to Martin L. Stevens Endowment Fund—		
Schedule B-4 .....	183.36	
Transferred to George M. Cooper Endowment Fund—		
Schedule B-5 .....	183.36	1,096.27
Balance on Deposit June 30, 1951 .....	\$ 245.98	
(Exhibit B)		

## Schedule B-3

Receipts and Disbursements  
McCain Endowment Fund

Year ended June 30, 1951

Balance in Savings Account July 1, 1950...\$1,869.00

## Receipts:

Transferred from Sanatoria Bed Fund—Schedule B-2.....\$	183.36	
Share Commission on <i>Today's</i> <i>Health Magazine</i> .....	13.33	
Contributions .....	31.00	
Savings Account Interest .....	9.39	237.08

2,106.08

## Disbursements:

U. S. Savings Bonds of 7-1-50 Series F (Face \$2,000).....	1,480.00
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Balance in Savings Account June 30, 1951..\$ 626.08  
(Exhibit B)

## Schedule B-4

Receipts and Disbursements  
Martin L. Stevens Endowment Fund

Year ended June 30, 1951

Balance in Savings Account July 1, 1950...\$2,539.66

## Receipts:

Transferred from Sanatoria Bed Fund—Schedule B-2.....\$	183.36	
Share Commission on <i>Today's</i> <i>Health Magazine</i> .....	13.33	
Contributions .....	375.00	
Interest on Investment .....	175.00	
Savings Account Interest .....	10.57	757.26

3,296.92

## Disbursements:

U. S. Savings Bonds of 7-1-50 Series G .....	2,000.00	
U. S. Savings Bonds of 6-1-51 Series G .....	1,000.00	3,000.00

Balance in Savings Account June 30, 1951..\$ 296.92  
(Exhibit B)

## Schedule B-5

Receipts and Disbursements  
George M. Cooper Endowment Fund

Year ended June 30, 1951

Balance in Savings Account July 1, 1950...\$2,422.75

## Receipts:

Transferred from Sanatoria Bed Fund .....	\$ 183.36	
Share Commission on <i>Today's</i> <i>Health Magazine</i> .....	13.34	
Contributions .....	1,168.35	
Savings Account Interest .....	5.91	1,370.96

3,793.71

## Disbursements:

U. S. Savings Bonds of 7-1-50 Series F (Face \$3,000).....	2,220.00	
U. S. Savings Bonds of 6-1-51 Series F (Face \$1,000).....	740.00	2,960.00

Balance in Savings Account June 30, 1951..\$ 833.71  
(Exhibit B)

## Schedule B-6

Receipts and Disbursements  
Student Loan Fund

Year ended June 30, 1951

Balance in Savings Account July 1, 1950...\$ 973.86

## Receipts:

Contributions .....	\$ 233.50	
Savings Account Interest .....	14.75	248.25

Balance in Savings Account June 30, 1951..\$1,222.11  
(Exhibit B)Report of the Finance Committee  
Budget 1951-1952

We, the Finance Committee of the Auxiliary to the Medical Society of the State of North Carolina, submit the following budget for 1951-1952, based on collecting dues of \$2.00 from 1500 members.

Mrs. B. Watson Roberts, President-Elect  
Mrs. T. L. Lee, First Vice President  
Mrs. E. C. Judd, Treasurer

President's office (including corresponding secretary) .....	\$ 100.00
Printing, mimeographing and typing (including 1500 membership cards) .....	300.00
Auditing treasurer's records .....	50.00
Envelopes and postage for mailing membership cards .....	65.00
Safety Bank Box—rent for one year.....	6.00
Chairman of past presidents .....	10.00
President-Elect (\$50.00 to be used when attending National Board Meetings).....	65.00
First vice president and councilors.....	100.00
Second vice president and activities chairmen .....	35.00
Recording secretary .....	20.00
Treasurer .....	50.00
Chairmen of Standing Committees:	
Public Relations .....	25.00
Program .....	25.00
Legislative .....	10.00
Press and Publicity .....	10.00
<i>Today's Health</i> .....	5.00
<i>Bulletin</i> .....	2.00
Scrapbook .....	1.00
Historian .....	5.00
Memorials .....	5.00
Research .....	10.00
Parliamentarian .....	10.00
Civil Defense .....	10.00
Movies and Radio .....	10.00
News Sheet .....	100.00
Miscellaneous .....	25.00
Sanatoria Beds .....	750.00
Dues to A.M.A. Auxiliary (1500 members) ..	1,500.00

\$3,304.00

Bal. in General Expense Fund.....\$	931.92
Balance in Sanatoria Fund.....	245.98
Estimated Dues .....	3,000.00

Total .....\$4,177.90

Balance .....\$ 873.90

## Report of the Program Chairman

The 1950-1951 program suggestions by Mrs. Harry F. Pohlmann, national program chairman; Mrs. J. W. Rose, Mrs. Harry L. Johnson, and I, were made available to every auxiliary in the state. I urged that programs on socialized medicine be given special attention, and asked for reports on all programs given. Accompanying the program material was a copy of a resolution to be signed by other civic clubs and sent to our congressman, two senators, President Truman, Mr. LeRoy Cox, and one copy to be placed in the files of each auxiliary.



I asked that programs or special talks be given in all civic clubs that the auxiliaries could reach, in order to familiarize the layman with the truth about socialized medicine. The listed programs given by each auxiliary proves the excellent response given to almost every suggestion offered.

Of the 41 auxiliaries, too few responded to the request for the name of the program chairman. Fewer still reported on the programs presented, but those reporting had done the job well. Alamance-Caswell Auxiliary reported that it was still in the social stage, holding two meetings a year. The others report from four meetings a year to one a month. Many auxiliaries enjoyed noted speakers. Robeson County entertained forty guests from civic clubs in the county, with emphasis on socialized medicine. Columbus county, besides doing much good work, had as their guest for a lunch meeting the New Hanover Medical Auxiliary. They also invited all the senior girls in the county to hear Miss Elizabeth Kemble, dean of the School of Nursing, University of North Carolina, speak on recruiting nurses.

A report for the year and a copy of the program suggestions have been sent to the Auxiliary to the American Medical Association.

The following programs are listed only once, although some were given by several auxiliaries:

#### I Suggested programs

1. Book review—**The Road Ahead**
2. History of the American Medical Association
3. Recruiting Student Nurses
4. What Socialized Medicine Really Means and How We Can Combat it
5. The Voluntary Way is the American Way
6. Observance of Doctors' Day
7. Programs in civic organizations concerning involuntary medical care, and resolutions to be sent to the proper people.

#### II Programs given

1. Film—Self-Examination for Cancer of the Breast
2. Sanatorium Bed Fund Drive
3. Musical program
4. X-ray Technique
5. Recruiting and Training Nurses' aides (Gaston County voted to support nurses' aide training that has been started again in Gastonia.)
6. Special dinner for doctors in December
7. Aims and Purposes of the United Nations
8. The Atlantic Union
9. Christmas party and spring picnic
10. Importance of Nurses' Aides in Hospitals
11. Civilian Defense
12. American Red Cross Blood Bank (in Charlotte). (How we can help to get donors and also to get help under voluntary services.)
13. Emergency Service in Hospital and in Town
14. Meeting held at Camp Rotary, with a Girl Scout program.

MRS. P. F. YATES

#### Report of the Public Relations Chairman

All effort has been concentrated upon soliciting resolutions opposing compulsory health insurance from the various county auxiliaries. Civic clubs and organizations in each county were urged to send in signed copies of the resolutions.

There has been splendid cooperation in the Auxiliary, and the response from the civic clubs has been good. Certainly, the concentrated effort has gained many friends for the medical profession, and gives a clearer conception of what we, as an organization, are trying to accomplish.

Reports have been sent to the national organization when requested.

Through the media of radio and newspapers, the American Medical Association's Public Relations Program has been brought before the public.

Essay contests have been held in the schools, creating much interest among the young group.

Although we have made tremendous strides, and might feel that because of the international emergency there is no major move being made to adopt any form of compulsory health insurance at this time, this is not the time to "rest on our oars." The danger is ever present.

I hope that the work will go forward next year, until eventually all the women in our state are behind this great movement.

MRS. JAMES H. McNEILL

#### Report of the Legislative Chairman

I attended the Executive Board meeting in September and shortly thereafter mailed cards to each county president urging her to appoint a legislative chairman and send her name to me.

In November, a list of twenty-nine names was finally compiled and sent to the American Medical Association's office in Chicago. Their bulletins went to each chairman weekly, which gave the county organizations participating an accurate, dependable, and steady source of material and information on legislation and on the A.M.A.'s stand on all bills pending during the last seven months.

I contributed material to the **News Letter** in November and filled several requests for a short resume of important bills.

On April 12 I sent a questionnaire to the twenty-nine chairmen, fourteen of whom replied—almost 50 per cent. The statistics show the good work done by the counties which did reply. I am confident that equally as good work has been done by those whose reports I have not yet received.

I found that: nine counties had one program on legislation; seven had some study or short reports at each meeting; ten assisted, in various ways, local or state medical societies in promoting desirable health legislation; and five reported individual members cooperating in local and state political campaigns, as individuals, not in the name of their organization.

MRS. POWELL G. FOX

#### Report of the Press and Publicity Chairman

A report of the fall Board meeting in McCain was sent to eight newspapers in the state.

The Auxiliary page in the **North Carolina Medical Journal** has been filled each month as follows:

November, 1950—Program suggestions by Mrs. P. F. Yates, State Program Chairman, and notes on the bed guests

December, 1950—**Today's Health** by Mrs. S. E. Warshauer

January, 1951—**Doctors' Day** by Mrs. Ben H. Kendall, with a message from the state president, Mrs. Harry L. Johnson

February, 1951—An article by Mr. LeRoy Cox, Director, Public Relations, Medical Society of the State of North Carolina

March, 1951—Timely advice from Dr. Rachel Davis

April, 1951—Excerpts from the national President's Letter in the March, 1951, issue of the **Bulletin of the Woman's Auxiliary to the American Medical Association**

A resume of the annual meeting at Pinehurst, with photographs of our president, Mrs. Harry L. Johnson, and the president-elect, Mrs. B. Watson Roberts, was sent to eight state papers.

The expenses of three news letters are as follows:

400 copies—December .....	\$13.00
" " Postage .....	4.75
" " —February .....	6.00
" " Postage .....	2.49
" " —April .....	3.60
" " Postage .....	2.42

Total .....\$32.26

BARBARA H. McNEILL

#### Report of the Bulletin Chairman

I am happy to report 103 subscriptions to the **Bulletin**. Thanks to each county chairman for her splendid work.

Mrs. Robert T. Odum from Winston-Salem reported 43 subscriptions from her auxiliary—the largest number reported from any auxiliary.

MRS. A. C. BULLA

#### Report of the Historian

With "Preparedness" as the keynote of our program for the year, the organized auxiliaries of our state have pressed steadily toward the objectives outlined by our president and program chairman. The results of these efforts as recorded by auxiliary historians have been duly filed.

Inasmuch as 1950-51 is a mid-century year, the Executive Board of the Auxiliary to the American Medical Association has requested a history of each state auxiliary, not to exceed 3,000 words. Such a record is being sent from North Carolina, which, together with histories from the other states, will be published in book form and placed in the archives at the central office.

For the coming year it will be most helpful if we can plan early to record all activities and have the reports reach the historian early in the spring.

MRS. CHARLES H. GAY

#### Report of the Scrapbook Chairman

As Scrapbook chairman, I attended the fall Board meeting, at which time I urged all auxiliaries to send their press notices to me, that I might enter them in the state Scrapbook. These clippings and other noteworthy material reflecting the work of the auxiliary has been carefully grouped in the Scrapbook, which is on display on the table in the Pine Room.

MRS. ALBERT LEE O'BRIANT

#### Report of the Research Chairman

During the year the following articles were submitted to Mrs. Charles F. Coin, chairman of Research and Romance of Medicine of the Auxiliary to the Southern Medical Association:

1. Thumbnail sketches of eight eminent physicians (from the *North Carolina Medical Journal*)

George Hughes Kirby  
Nathaniel Alexander  
John Brickell  
Ephraim Brevard  
Thomas Fanning Wood  
William Peter Malblett  
William Osler  
The DeRosset family

2. Articles for the *North Carolina Medical Journal*

- A. History of the Stevens Bed
- B. Article on Public Relations Committee by LeRoy H. Cox, Director of Public Relations of the State Medical Society of North Carolina
- C. Message from our 1950-1951 State Auxiliary President, Mrs. Harry Johnson

- D. Suggestions for Auxiliary members for our Public Relations program by Dr. Rachel D. Davis of Kinston, chairman of the Advisory Board

#### 3. Clippings from **Community Health**

- A. From the Doctor's Viewpoint, by Dr. Donald B. Koonce of Wilmington
- B. The Doctor of the Year, Dr. Roscoe D. McMillan

4. News clippings of events from Guilford, New Hanover, Hoke, and Catawba Medical Auxiliaries

A Poem by Eliza Ann Spease of the Forsyth County Medical Auxiliary, an article on the history of the first North Carolina medical school written by Mrs. Sarah Hiatt of the Hoke County Auxiliary, and copies of the **Medical Women's Journal** through December, 1950, including the article, "Medical Women of North Carolina," by Dr. Irma Henderson Smothers have been added to our files.

This brings up to date the project started by the previous chairman of our committee.

As your chairman, I suggest that we continue to assemble copies of the **Medical Women's Journal**, in which is appearing a series of biographies of women who practiced medicine in North Carolina during the one hundred years, 1847 through 1947. These are being compiled by Dr. Henderson Smathers, and will be published in book form at a later date. At this time I suggest, as did the 1949-1950 chairman, that this book be made the beginning of a permanent library.

MRS. H. C. LENNON

#### Report of Today's Health Chairman

In the fall of 1950 instructions for carrying on the work of **Today's Health**, and stating the purpose and goals of the project, were sent to each auxiliary in the state. Supplies and reminders were sent to all chairmen who requested them.

Everyone was urged to participate in the national contest for subscriptions to **Today's Health**. We are very proud of the Wayne County Auxiliary for their fine work in securing 78 subscriptions. They received national recognition in the contest, even though they did not win a cash prize. I hope that this auxiliary will be an example to the rest of the auxiliaries in the state for next year. The members are to be commended for their fine efforts and for winning our \$5.00 prize. Forsyth County was second, with 28 subscriptions.

An effort was made this spring to arrange for a booth with an exhibit on **Today's Health**, at the state meeting. Unfortunately, this goal was not achieved. However, I hope that such a project can be carried out next year. It is important to increase the circulation of the magazine within the profession as well as among the general public.

Letters requesting reports and suggestions were sent to each auxiliary again in the spring.

The total number of subscriptions received was 214, and the commission earned was \$40.00. This amount has been turned over to Mrs. E. C. Judd, treasurer.

It has been a real pleasure to serve as **Today's Health** chairman for the past year, and I hope that your chairman for next year will accomplish bigger and better things.

County	No. Subscriptions
Columbus .....	3
New Hanover .....	17
Edgecombe-Nash .....	11
Wayne .....	78
Wilson .....	16
Cumberland .....	2
Wake .....	5
Gaston .....	16
Forsyth .....	28



Guilford .....	7
Surry-Yadkin .....	10
Burke .....	9
Caldwell .....	8
Rowan-Davie .....	4

MRS. S. E. WARSHAUER

#### Jane Todd Crawford Memorial Fund

The Auxiliary to the Medical Society of the State of North Carolina is anxious to cooperate in every way with the Auxiliary to the Southern Medical Association. One of the projects sponsored by this association is the Jane Todd Crawford Memorial Fund for postgraduate study in gynecology.

To raise money for this fund, a letter was sent on August 30, 1950, to each of the forty-one county auxiliary presidents, reviewing the purpose of this loan fund and urging careful consideration of this cause. At our Executive Board meeting on September 26, 1950, at McCain, information about the loan fund was brought to the attention of the members, who were requested to send in their contributions at once. The response was most gratifying. The sum of \$59.00 was collected and sent, with a typed report, to the Southern Medical Auxiliary on November 7, 1950.

It gives me great pleasure to report that North Carolina ranked third in its contributions to this worthwhile fund. Since November, \$18.50 has been collected. Had all of this sum been in on time, we might have ranked first. Thank you for your fine cooperation; we are hoping to do even better next year.

MRS. J. S. HIATT, JR.

#### Report of the Doctors' Day Chairman

Doctors' Day was more extensively observed this year than ever before, as many counties reported their observance for the first time. The day was remembered in many interesting ways, but the red carnation boutonniere and dinners seemed to be most popular.

Much more publicity was given to doctors through newspapers, radios, and even church bulletins. In Buncombe County the very fine tribute to the American doctor distributed by Phillip Morris Company, "For Services Rendered," was read over the radio. Quoting from the chairman of the Public Relations Committee of Buncombe County Medical Society, Dr. Henderson Smathers wrote to the radio station: "It is very gratifying to see our friends promote this nice piece of advertising which the American doctors need and very much appreciate."

MRS. BEN H. KENDALL

#### Report of the Revisions Committee

The Committee on Revisions recommends adoption of the following revision of the By-Laws:

##### Student Loan Fund Article II, Section 2

Change to read: "The loan shall be limited to \$500 a year for two years, to any one individual."

#### Proposed Revisions to the Constitution and By-Laws of the National Auxiliary

The committee recommends that the North Carolina delegates to the National Convention be instructed to vote for the proposed revisions to the Constitution and By-Laws of the National Auxiliary.

#### Further Recommendations

The committee further recommends that the incoming president appoint a committee to revise Article III, Section 2, (membership and dues) of the By-Laws concerning honorary members.

MRS. JOHN T. SAUNDERS

#### Report of the Nominating Committee

The Nominating Committee, composed of Mrs. Raymond Thompson of Charlotte, chairman, Mrs. Ben F. Royal of Morehead City, Mrs. Frederick Taylor of High Point, and Mrs. A. L. O'Briant of Raeford, submit for your approval the following state of officers:

President-Elect—Mrs. J. E. Wright, Macclesfield  
Recording Secretary—Mrs. H. K. Herrin,  
Gastonia

#### Inaugural Remarks of the Incoming President

Madam President and fellow Auxiliary members: I want to thank you for the honor you have paid me in choosing me for your president for the coming year. With this honor goes responsibility, and this responsibility I accept. The North Carolina Medical Auxiliary is as old as the national organization, being organized in April, 1923, by our beloved "Sadie" McCain. She not only organized and became its first president, but she led the infant society by the hand for many years. She is our source of information and encouragement whenever either is needed.

For the last several years our Auxiliary has grown in national stature—when Mrs. Thomas Leslie Lee made the national society more aware of North Carolina, and this year when Mrs. Harry Johnson was invited to appear on a panel discussion on organization at the Seventh Annual Auxiliary Conference for presidents and presidents-elect. I am fully aware of the fine leadership we have had in the past, and I pledge my best efforts to keep it on such a plane.

The year ahead will not be easy. In 1948 when we abandoned the office of chairman of Post War Planning, we thought we were "over the hump" and could turn our attention to health education, nurse recruitment, and the like; but now in 1951 we must again appoint a chairman of Civil Defense. As doctors' wives we must be leaders in this field. For those who were young enough to have your husbands in service in World War II, and for those of us who were old enough to watch our husbands carrying much too heavy a load during that period, we know what it will mean to have another conflict. The possibilities are such that we must prepare for a conflict that will transcend anything we have heretofore faced. We are in the atomic age and must be ready when emergencies arise.

We are public relations chairmen for our husbands and the medical profession whether we like it or not. Public relations of organized medicine have been strained. Much of the questioning and verbal jousting has been occasioned by organized labor and communistic thinking. On the lower level, however, the doctor-patient relationship is generally pleasant and satisfactory. Social planning has been our biggest antagonist. We can do much to keep the local level smooth—a pleasant voice on the telephone, a feeling of cooperation and assurance that the doctor is interested in the welfare of every one of his patients.

We must work on the local and state levels and bend all our efforts to further the program of the A.M.A. It is ever proper to keep in the forefront of our thinking that we are an auxiliary and not the profession. Matters affecting the profession naturally redound to us as Auxiliary members. As we help our husbands at home, trying to smooth their paths and lessen the tension, so is our role mapped for us as a group when we are called upon by the state or national society. There is an obligation with this privilege of being an auxiliary to the greatest profession in the world.

Thank you for entrusting me with the leadership of this organization.

MRS. B. W. ROBERTS

# ROSTER OF AUXILIARY MEMBERS

1950-1951

Mrs. Abbott, R. W.....	Goldsboro	Mrs. Barrett, J. M.....	Greenville	Mrs. Bond, George F.....	Bat Cave
Mrs. Adair, W. E., Jr.....	Erwin	Mrs. Bartlett, G. R.....	Greenville	Mrs. Bonner, K. P. B.....	Morehead City
Mrs. Adams, C. N.....	Winston-Salem	Mrs. Barron, A. A.....	Charlotte	Mrs. Bonner, O. B.....	High Point
Mrs. Adams, H. S.....	Winston-Salem	Mrs. Basnight, T. G.....	Greenville	Mrs. Boone, Waldo.....	Durham
Mrs. Adams, J. R.....	Charlotte	Mrs. Bass, H. H.....	Henderson	Mrs. Booker, E. N.....	Selma
Mrs. Adams, R. K.....	Morganton	Mrs. Baxter, O. D.....	Matthews	Mrs. Bost, T. C.....	Charlotte
Mrs. Adler, O. L.....	Wakertown	Mrs. Baylin, George.....	Durham	Mrs. Bowers, M. A.....	Winston-Salem
Mrs. Aderholt, M. L.....	High Point	Mrs. Beamer, Parker.....	Winston-Salem	Mrs. Bowles, Norman.....	Durham
Mrs. Adkins, T. F.....	Durham	Mrs. Beard, G. C.....	Atkinson	Mrs. Bowman, H. E.....	Aberdeen
Mrs. Albright, S. L.....	Belmont	Mrs. Beasley, E. B.....	Fountain	Mrs. Boyce, O. D.....	Gastonia
Mrs. Alexander, Eben.....	Winston-Salem	Mrs. Beavers, J. W.....	Kernersville	Mrs. Boyette, D. P.....	Ahoshkie
Mrs. Alexander, J. M.....	Charlotte	Mrs. Beavers, W. O.....	Greensboro	Mrs. Brabson, J. A.....	Charlotte
Mrs. Alexander, S. B.....	Chapel Hill	Mrs. Beckwith, C. P.....	Roanoke Rapids	Mrs. Bradford, W. B.....	Charlotte
Mrs. Alexander, W. M.....	McCain	Mrs. Beddingfield, L. T.....	Stantonsburg	Mrs. Bradford, W. Z.....	Charlotte
Mrs. Allen, George C.....	Lumberton	Mrs. Belcher, C. C.....	Asheville	Mrs. Bradshaw, H. H.....	Winston-Salem
Mrs. Alsup, W. B.....	Winston-Salem	Mrs. Belk, Geo. W.....	Gastonia	Mrs. Bradshaw, T. G.....	Rock Ridge
Mrs. Alyea, E. P.....	Durham	Mrs. Bell, Erick.....	Wilson	Mrs. Bradley, H. J.....	Greensboro
Mrs. Ames, R. H.....	Greensboro	Mrs. Bell, O. E.....	Rocky Mount	Mrs. Bradley, John S.....	Asheville
Mrs. Anders, McG.....	Gastonia	Mrs. Bell, Spencer A.....	Hamptonville	Mrs. Brady, C. E.....	Robbins
Mrs. Anderson, E. C.....	Wilmington	Mrs. Benbow, Edgar.....	Winston-Salem	Mrs. Branaman, Guy.....	Raleigh
Mrs. Anderson, J. B.....	Asheville	Mrs. Bender, J. J.....	Red Springs	Mrs. Brandon, H. A.....	Yadkinville
Mrs. Anderson, Norman L.....	Asheville	Mrs. Bender, J. R.....	Winston-Salem	Mrs. Brandon, William R.....	Statesville
Mrs. Anderson, W. Banks.....	Durham	Mrs. Bennett, E. C.....	Elizabethtown	Mrs. Brantley, Julian, Jr.....	Rocky Mount
Mrs. Anderson, Wade.....	Wilson	Mrs. Benson, N. O.....	Lumberton	Mrs. Breeden, W. H.....	Fayetteville
Mrs. Andrews, L. A.....	Winston-Salem	Mrs. Bentley, J. G.....	Moravian Falls	Mrs. Brenizer, A. G., Jr.....	Charlotte
Mrs. Angel, Edgar.....	Franklin	Mrs. Benton, George, Jr.....	Goldsboro	Mrs. Brewer, J. Street.....	Roseboro
Mrs. Anthony, W. A.....	Gastonia	Mrs. Benton, Wayne J.....	Greensboro	Mrs. Brian, Earl W.....	Raleigh
Mrs. Applewhite, C. C.....	Raleigh	Mrs. Berkeley, A. R., Jr.....	Charlotte	Mrs. Briggs, H. H.....	Asheville
Mrs. Arena, Jay.....	Durham	Mrs. Berryhill, W. Reece.....	Chapel Hill	Mrs. Brinkhous, Kenneth W.....	Chapel Hill
Mrs. Armentrout, C. H.....	Asheville	Mrs. Best, D. K.....	Goldsboro	Mrs. Brinn, T. P.....	Hertford
Mrs. Armistead, D. B.....	Greenville	Mrs. Best, Glenn E.....	Clinton	Mrs. Britt, J. N.....	Lumberton
Mrs. Armstrong, B. W.....	Charlotte	Mrs. Bethel, M. B.....	Charlotte	Mrs. Brockman, H. L.....	High Point
Mrs. Armstrong, C. W.....	Salisbury	Mrs. Bigham, R. S., Jr.....	Charlotte	Mrs. Brooks, F. P.....	Greenville
Mrs. Arney, W. C.....	Morganton	Mrs. Biggs, D. W., Jr.....	Lumberton	Mrs. Broughton, A. C., Jr.....	Raleigh
Mrs. Arnold, Jesse.....	Kinston	Mrs. Biggs, J. I.....	Lumberton	Mrs. Broun, M. S.....	Roanoke Rapids
Mrs. Arnold, Ralph A.....	Durham	Mrs. Eillings, G. M.....	Morganton	Mrs. Brouse, I. E.....	Wilmington
Mrs. Ashford, C. H.....	New Bern	Mrs. Bird, I.....	Greensboro	Mrs. Brown, Clarence E.....	Faitte
Mrs. Atkins, S. S.....	Asheville	Mrs. Bittinger, C. L.....	Mooreville	Mrs. Brown, C. R.....	Goldsboro
Mrs. Aycock, F. M.....	Princeton	Mrs. Bittinger, S. M.....	Black Mountain	Mrs. Brown, G. W.....	Raeford
Mrs. Aycock, Jack.....	Statesville	Mrs. Bizzell, Edward.....	Goldsboro	Mrs. Brown, E. M.....	Washington
Mrs. Ayers, James S.....	Clinton	Mrs. Bizzell, James.....	Goldsboro	Mrs. Brown, Frank R.....	Greensboro
Mrs. Austin, F. D., Jr.....	Charlotte	Mrs. Bizzell, Malcolm.....	Goldsboro	Mrs. Brown, Geo. L.....	Charlotte
Mrs. Bahnson, E. R.....	Winston-Salem	Mrs. Black, J. R.....	Whiteville	Mrs. Brown, Ivan W.....	Durham
Mrs. Bailey, C. W.....	Rocky Mount	Mrs. Black, P. A. L.....	Wilmington	Mrs. Brown, J. A.....	Cleveland
Mrs. Baird, Haynes.....	Charlotte	Mrs. Black, Kyle E.....	Salisbury	Mrs. Brown, K. S.....	Asheville
Mrs. Baker, H. M.....	Lumberton	Mrs. Blackshear, T. J.....	Wilson	Mrs. Brown, L. G.....	Southport
Mrs. Baker, Lenox D.....	Durham	Mrs. Blackwelder, Verne H.....	Lenoir	Mrs. Brown, M. S.....	Roanoke Rapids
Mrs. Baker, T. W.....	Charlotte	Mrs. Blair, Andrew.....	Charlotte	Mrs. Brown, Victor E.....	Williamston
Mrs. Baldwin, W. E.....	Whiteville	Mrs. Blair, J. L.....	Gastonia	Mrs. Bryan, A. Hughes.....	Chapel Hill
Mrs. Balsey, B.....	Reidsville	Mrs. Blake, Robert.....	Statesville	Mrs. Buckner, J. M.....	Swannanoa
Mrs. Ballew, J. R.....	Raleigh	Mrs. Blalock, B. K.....	Charlotte	Mrs. Buffalo, J. S.....	Garner
Mrs. Baluss, John.....	Fayetteville	Mrs. Blount, F. A.....	Winston-Salem	Mrs. Bugg, C. R.....	Raleigh
Mrs. Barefoot, G. B.....	Wilmington	Mrs. Blow, R. B.....	Weldon	Mrs. Bugg, Everett I., Jr.....	Durham
Mrs. Barefoot, W. F.....	Wilmington	Mrs. Blue, Waylon.....	Sanford	Mrs. Buie, R. M., Jr.....	Greensboro
Mrs. Barker, C. S.....	New Bern	Mrs. Bolus, Michael.....	Raleigh	Mrs. Buie, R. M., Sr.....	Greensboro
Mrs. Barnes, B. F.....	Elm City				
Mrs. Barnes, H. K.....	Hickory				



- Mrs. Bulla, A. C. .... Raleigh  
 Mrs. Bullock, D. D. .... Rowland  
 Mrs. Bullock, Ernest. .... Wilmington  
 Mrs. Bumgarner, John R. ....  
     Black Mountain  
 Mrs. Bundy, W. L. ....  
     North Wilkesboro  
 Mrs. Bunn, David G. .... Pembroke  
 Mrs. Bunn, R. W. ....  
     Winston-Salem  
 Mrs. Burton, C. N. .... Asheville  
 Mrs. Busby, Geo. E. .... Salisbury  
 Mrs. Butler, T. .... Durham  
 Mrs. Byerly, J. H. .... Sanford  
 Mrs. Byerly, W. G. .... Lenoir  
 Mrs. Byrd, Chas. W. .... Dunn  
 Mrs. Byrnes, T. H. .... Charlotte  
 Mrs. Byrum, C. C. .... Belhaven  
 Mrs. Caldwell, Jesse. .... Gastonia  
 Mrs. Caldwell, Lawrence ....  
     Newton  
 Mrs. Caldwell, Robert M. ....  
     Mount Airy  
 Mrs. Callaway, J. Lamar ....  
     Durham  
 Mrs. Camtlos, Joshua .... Asheville  
 Mrs. Campbell, Paul C., Jr. ....  
     Fayetteville  
 Mrs. Campbell, Leonard ....  
     Asheville  
 Mrs. Cardwell, Willard ....  
     Greensboro  
 Mrs. Carlyle, J. B. .... Burlington  
 Mrs. Carpenter, C. C. ....  
     Winston-Salem  
 Mrs. Carpenter, F. L. .... Statesville  
 Mrs. Carrington, George ....  
     Burlington  
 Mrs. Carroll, F. W. .... Hookerton  
 Mrs. Carter, Bayard .... Durham  
 Mrs. Casstevens, J. C. ....  
     Winston-Salem  
 Mrs. Casteen, Kenan. .... Leaksville  
 Mrs. Cates, Banks R., Jr. ....  
     Charlotte  
 Mrs. Caveness, Z. M. .... Raleigh  
 Mrs. Caviness, V. S. .... Raleigh  
 Mrs. Cayer, David ....  
     Winston-Salem  
 Mrs. Cekada, Emil B. .... Durham  
 Mrs. Chandler, W. P. ....  
     Weaverville  
 Mrs. Chapman, E. J. .... Asheville  
 Mrs. Chaplin, S. C. .... Columbia  
 Mrs. Cheek, K. M. .... High Point  
 Mrs. Cherry, J. H. .... Asheville  
 Mrs. Chesson, A. L. .... Raleigh  
 Mrs. Cheves, W. G. .... Raleigh  
 Mrs. Choate, A. B. .... Charlotte  
 Mrs. Choate, Walter J. ....  
     Salisbury  
 Mrs. Childs, H. N. .... Jamestown  
 Mrs. Clapp, Hubert. .... Swannanoa  
 Mrs. Clark, Bodie T. .... Wilson  
 Mrs. Clark, D. D. .... Clarkton  
 Mrs. Clark, Harold S. .... Asheville  
 Mrs. Clark, Henry. .... Chapel Hill  
 Mrs. Clark, Milton S. .... Goldsboro  
 Mrs. Clay, Thomas. .... Mayodan  
 Mrs. Clayton, Eugene J. ....  
     Asheville  
 Mrs. Clinton, R. S. .... Gastonia  
 Mrs. Cloninger, Charles. .... Conover  
 Mrs. Cloninger, Kenneth. .... Newton  
 Mrs. Cobb, D. B. .... Goldsboro  
 Mrs. Cocheran, J. D. .... Newton  
 Mrs. Codington, H. A. ....  
     Wilmington
- Mrs. Coffey, J. C. .... Salisbury  
 Mrs. Cogdell, David M. ....  
     Fayetteville  
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## BULLETIN BOARD

(CONTINUED FROM PAGE 451)

### DISABLED AMERICAN VETERANS

The 1951 Gorgas Award of the Association of Military Surgeons of the United States will be presented to Rear Admiral Charles S. Stephenson, USN, Retired, medical advisor of the Disabled American Veterans. One of medicine's highest honors, the Gorgas Award will be presented to Admiral Stephenson in October at the association convention in Chicago. The presentation consists of a silver medal, a scroll, and a cash award of \$500.

The medical advisor of the DAV achieved distinction by his work in tropical diseases. He also organized and directed the United States Typhus Commission for which he was decorated by the United States government.

### Dr. Rusk Receives 1951 Research Award

The annual Research Award of the American Pharmaceutical Manufacturers Association, two of whose four previous winners subsequently won the Nobel Prize in medicine, was presented in Boca Raton, Florida, recently for the first time to a clinician. He is Dr. Howard A. Rusk, director of the Institute of Rehabilitation and Physical Medicine of the New York University—Bellevue Medical Center, and associate editor of *The New York Times*.

Now recognized as an essential phase of medicine and a socio-economic problem, the "third phase" is devoted to the care of the handicapped from the time they leave their beds until they are satisfactorily employed.

The A.P.M.A. award was established in 1947. It is made "in recognition of the work of an investigator who has made a significant contribution in the field of medicine or the medical sciences."

Previous winners were Dr. Bernardo Alberto Houssay of Argentina; Dr. Dilworth Wayne Woolley of the Rockefeller Foundation; Dr. Selman Waksman of Rutgers University; and Dr. Edward C. Kendall of the Mayo Clinic, discoverer of cortisone. Dr. Kendall and Dr. Houssay received the Nobel Prize.

"Dr. Rusk's research has directly affected the lives of many thousands of service men and civilians," Dr. Lasersohn said in his address. "His own clinical management of patients has rehabilitated to active useful life innumerable individuals who have sustained catastrophic accidental injury or who have become crippled from such paralyzing conditions as poliomyelitis, multiple sclerosis, cerebral palsy, paraplegia and viral spinal cord infections."

While in the military service during the last

war, Dr. Rusk was Chief of the Convalescent Services Division of the Army Air Forces. He then first brought into prominence the "third phase of medical care." Awarded the Distinguished Service Medal in 1945, he now holds the rank of brigadier general in the reserve.

### SUGAR CONSUMPTION AND DENTAL DECAY

It will take 100 pounds of sugar to satisfy the "sweet tooth" of each person in the United States during 1951, according to the Secretary of Agriculture who has set the year's quota at eight million pounds, based on requirements of consumers. Comparing this with the three pounds per person used in China, it is easy to understand why the United States is the leading sugar consumer in the world, says *The Reporter* in the May 1 issue.

Our excessive sugar consumption has been the despair of the medical and dental profession and nutritionists alike, who claim that we consume four times the amount we should. It is generally accepted by the American Dental Association that dental caries are caused by the "reaction of acids on carbohydrates." These findings are borne out by Dr. Fred D. Miller of Altoona, Pennsylvania. Dr. Miller has lived to see a generation of his young patients grow up with sound teeth due to restricted intake of sugar.

Last December, Dr. Miller startled the Delaney chemical investigating committee of the House by announcing that 98 per cent of the population of this country suffers from tooth decay, and that the 78,000 dentists in the U. S. can never catch up on the backlog of cavities as long as our dietary habits remain the same. During World War II, 188,000 of the first million men drafted were rejected because they could not meet Uncle Sam's requirement of at least twelve teeth in the mouth. This requirement was soon abandoned as impractical.

### Lilly Expands Research Laboratories

Ely Lilly and Company has announced the completion of a 204 foot 3 story extension to the south wing of the Lilly Research Laboratories. This is the fourth addition to the original 220 foot structure, and almost duplicates the facilities provided in 1934. The first, second, and third additions, completed in 1939, 1940, and 1948 respectively, already had almost doubled the laboratory facilities of the original building.

The research staff is also being augmented to handle the ever growing research program. From the humble beginning in 1894, when the scientific division was established with one pharmacist and a helper, the staff has grown to 532 people, who represent almost every science related to pharmacy and medicine.



# NORTH CAROLINA MEDICAL JOURNAL

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## CONSERVATION OF OUR AGING POPULATION

CLARK TIBBITTS\*

WASHINGTON, D. C.

At first blush it may seem a bit odd that a public servant at work in a Federal Security Agency program in the field of aging should have elected Conservation as the topic of his discussion. This area, it may reasonably occur, could better be left to the spokesmen of, say, our Department of the Interior. True enough, if we are content to confine the word within the comparatively narrow limits of the connotations given it through much usage. But are we?

Even those whose special interest is land conservation give the word its truer and broader meaning. As a matter of fact, I have taken my text from a prominent spokesman for our Department of the Interior—Mr. Marion Clawson, Director of the Department's Bureau of Land Management.

### *Conservation—a Definition*

"Just what do we mean by conservation?" Mr. Clawson asked a graduating class at Billings, Montana, early this month. Then he proceeded to answer his own question:

"Conservation means the maximum, continued use of resources both material and human. I believe that all parts of this definition are equally important. Maximum use is essential for the greatest productivity of our resources. Likewise, efficient use is necessary in order to achieve that maximum. By conservation we do not mean a feast today and a famine tomorrow, but a continued use of resources for the longest possible period."

What applies to land management applies with equal force to our management of that vast resource represented by the older group in our population. What is to be said of our claim to efficiency while the experience, special talents and acquired skills, and wisdom of millions of our seasoned men and

women are all too commonly thrown aside, as though by the centrifugal force of a high-powered economy geared to youth and speed?

So far as I know, Mr. Clawson was not asked this question. Nevertheless, he gave the Montana students what seems to me a peculiarly satisfying answer to it.

"While conservation relates very largely to the use of material or physical resources such as land, and the resources above and below the earth, it can apply also to the use of **human** resources. When we are considering the use of physical and natural resources we are concerned primarily with how these resources contribute to human welfare. Thus defined, **conservation is an attitude of mind**, rather than a specific program of any kind. Conservation, in this sense of the word, involves **primary emphasis upon human values**. We are concerned with the **maximum well-being of the individual**, both now and in the future. We definitely do not want to lock up resources and withhold them from use, but on the contrary we want to make the **maximum present use** of them which is not incompatible with a continued use in the future."

### *Human Conservation*

This, in its essence, is the problem of the conservation of an aging population. Its solution will be found through a cultivated "attitude of mind, rather than through a specific program." It calls, primarily, for emphasis upon human values. It is concerned with "the maximum well-being of the individual," and the maximum effective use of our population, of all age groups.

It is not necessary for the purpose of this discussion to spend time in a statistical analysis of the aging problem. I am happy to report, that awareness of these statistics and their significance is spreading throughout the country. Community activities, new university extension courses, conferences, institutes, and new research projects—all are reflecting public recognition of problems implicit in the fact that the age level of the people of the United States has been rising

Read before the North Carolina Conference on Aging, Raleigh, June 28, 1951.

\*Chairman of the Committee on Aging and Geriatrics, Federal Security Agency.

at a rate which indicates that by 1975 some 13 per cent of our total population may be 65 years of age or older; and that while this has been going on, our highly industrialized economy has been throwing a larger and larger proportion of these older people into disuse.

The country at large is beginning to see that here is an anomaly packed with trouble, if not peril. Communist aggression has forced us to superimpose an expanded defense program upon a booming civilian economy. We have undertaken a limited mobilization of our resources for defense. Conservation in its broadest sense has become vitally important. Somehow, we must find ways by which "to make the maximum present use of our human resources which is not incompatible with a continued use in the future."

Instead of discarding older workers, we must discard the outworn and now dangerous idea of chronologic age as a measure of capacity and potential productiveness. I believe that by working in this direction we shall soonest arrive at sound ways of dealing with both the utilitarian and humanitarian aspects of the problems of an aging population. I believe, too, that we shall then find that the humanitarian and utilitarian factors are inseparable, the one dependent upon the other; and that eventually we shall come to accept, as a principle of our free society, that the community must make a primary concern of the security, productiveness, and well-being of the individuals who make it up. That will be conservation.

#### *Needs of the Aging*

We are still somewhat short of unanimity as to whether and to what extent productiveness is an essential of the later years. Looking back over the deliberations of the Conference on Aging last summer, I believe that the greatest heat was generated over the question of the role of the older person in the productive economy. The question of employment was debated in at least half of the sections.

The divergent points of view may be summarized as follows: One group includes those who believe that older people do not have the capacity for continued productive work; that their services are not needed; that they have made their contribution and are entitled to rest; that pensions repre-

senting some fraction of their former earnings will allow them to meet their simplified needs and to live in contentment. On the other side are those who see older people as wanting to continue in useful roles; as able, by and large, to continue in productive employment; as persons whose services are actually needed during the period of mobilization at least; as being too expensive to maintain in retirement. This group does not accept the contention that human needs are simplified with accumulation of years.

My own view, and that of most Conference participants, conforms more closely to the second of these two positions. The more I learn of this subject of aging, the more I become convinced that the fundamental need of aging people—perhaps the essence of the whole problem—is their desire to continue as full-fledged members of the community.

Older people have the same need to be wanted that all of us have. They have a compelling desire to feel useful, to be appreciated, to be recognized for their importance—in short, to be a necessary part of things. In addition, they desire the love and companionship found in family relationships and close friendships. Finally, they need self-respect that comes from independence, both financially and in terms of self-management.

Conversely, I think perhaps the greatest fear older people have is that of being set aside as useless, financially dependent, and unwanted. We need a great deal of research in the aging field but we don't need to have this point proved. There is evidence in the fact that nearly three million older people are still employed, that most of those who retire do so involuntarily.

There is evidence from all who have interviewed older people who have retired (or are faced with retirement) from gainful employment or from homemaking. These interviews turn up instance after instance of hunger for something to do and of great loneliness from lack of family and social contacts.

There is evidence from older people who are being brought into panel discussions. The ones who are enjoying life are the ones who are busy, who have recognition for what they are doing, who have human companionship. All insist upon the importance of having the means to participate and the opportunity for self-expression.



### *A Cultural Lag*

Meeting the needs of older people is not an easy task. For one thing, their needs cover nearly the whole range of human activities. In addition, older people are individuals, and their interests and circumstances are infinite in variety. The situation, as I see it, however, is that the older people of 1951 are living in a culture that was not built for them, that has moved away from the roles we have assigned them.

In the hand economy of earlier years—primarily agricultural—the sense of usefulness was derived from having a positive role in the productive family group. Most people lived through the reproductive period and then died. Relatively few lived beyond middle life and these, apparently, had little difficulty in finding useful activity.

The transition to mechanical production and the use of power has tended to freeze older people out. The number of older workers employed has increased, but the proportion in gainful employment dropped by almost one-half between 1890 and 1940.

Family life has changed, too. Most workers earn their living outside the home and have no economic need for the older generation in the home. Indeed, many young people leave the community of their parents. The social interests of the young also tend to be focused outside of the home and do not include grandparents. Standards for children are higher, producing greater competition for family income. Families are smaller and parents are living longer, thus placing a greater burden on the fewer children who do try to care for their parents.

Briefly, we are confronted with a cultural lag. Technology and changing family life are leaving older people stranded. The job before us is plainly one of re-incorporating aging people into the total life of the community.

Society must invent ways of meeting the needs of aging people so that they not only feel but are a part of the social system. It is not entirely a task of social and welfare work, although that is a part of it. It is not merely doing for older people, though some require that. It is actually a question of conserving their potentialities—creating an environment in which they can employ their skills, experience, and wisdom in making continuing contributions, not for themselves alone but for all of us. It is the job of sub-

stituting a contributory status for one of dependency.

And, I repeat, it appears to be a job for the community and not just for the individual families that happen to have older people in them. If we accept the analysis I have tried to make, we recognize that the shift is away from family responsibility to community responsibility.

### *The Neglected Resource*

Two groups of our aging population call for special consideration in any examination of the requirements of human resource conservation. The one is comprised of men and women from about 35 to 65, who are in the earlier stages of the aging process. There are sizeable numbers in this group who are barred from employment by age barriers. The other group is comprised of men and women aged 65 and over.

This analysis will be limited to the conservation area represented by the second group. Basing our calculations on Bureau of Census data for 1950, we may estimate the present number of persons in this group at nearly 13 million. At one extreme are those—about a quarter of the total—who are gainfully employed. At the other extreme are perhaps from one to two million who are too infirm or too ill to work any more, and who need and deserve adequate care and the greatest possible measure of comfort. Between these two extremes lies a resource whose vast potential is a present and insistent call for conservation. In this group are millions of men and women who are either physically and mentally fit and eager to work; or who can be rehabilitated for work; or for whom activities which will serve as substitutes for direct participation in the work force can be devised.

### *Some Conservation Experiments*

Many experiments are going on in various places across the country designed to utilize the capacities of this middle group. We do not yet know how successful they are.

Some business and industrial establishments are retaining or bringing older workers in for full- or part-time work. Some older people are finding their own solutions in paid work, in avocational pursuits that afford satisfying recognition, or in voluntary community activities.

Efforts are being made in several places to find new activities for older people. I

believe that the civil defense program offers opportunity for older people, as it did during the last war. The Red Cross has utilized older women in a variety of useful ways. The British used women as radar watchers. Without waiting for actual war, we can steer older women into shortage occupations such as practical nursing, clerical and sales work, operators of foster and boarding homes, and probably many other occupations that do not require years of training and experience.

Day centers for older people and golden age clubs represent another device for satisfying varied needs. In New York, Cleveland, and elsewhere these centers have workshops for handicrafts; facilities for learning to draw and paint and to play musical instruments; discussion groups, dramatics, club newspapers, social gatherings, and committees for visiting the sick.

In addition to actual activity, these centers provide older people an opportunity for creative self-expression, for recognition of their accomplishments, for making new friends, and for getting their minds off themselves. Who is to say that persons who develop handicraft skills are not making positive contributions to American culture?

The Hodson Center in New York is the oldest one. During the eight years of its existence, it has attracted more than 400 people. Mental health statisticians say that 40 out of a population of this size in this age group over a comparable period would be expected to become candidates for admission to a mental hospital. Not one has! Think of the human misery that has been spared, the mental discomfort of families, and the saving in costs of providing hospital beds! Every retired older person who cares for his own health needs and mental well-being is making a social contribution.

I cannot refrain from pointing out that the public funds for these New York day centers and in Minneapolis, too, are provided by the welfare department. The assumption is that the expenditures will be more than offset in savings in the time of welfare workers, physicians, and hospital staffs.

Alertness to current social issues and intelligent action with reference to them represents another area of positive social participation. Adult education programs are being revised in some places to present stronger appeals to older people. Discussion

groups and forums are being organized; library facilities extended.

These are a few of the projects that are being developed. We know very little about them yet, how and where they can best be organized, the extent to which they satisfy needs. The entire area represents a fruitful and important field for experiment.

### *"Manpower"—What Is It?*

In conclusion, I want to suggest a speculation which has been taking no small part in my own recent thinking about the nation's human resources in general, and about the reservoir represented by the older group in particular. What is the potential? What are the values, quantitative and qualitative, to be realized through conservation of our older people? Who knows? Nobody. The answer lies beyond any human calculation.

"Manpower mobilization" is a term that has come into popular use since our national defense program got under way. It has become so familiar that we use it almost as though manpower were a ponderable, to be measured, weighed, or its quantity calculated, like so much tin, oil, or foodstuffs. If that were so, of course, there would have to be a unit of manpower. Is there one? What is it? Webster defines it as "one-tenth of a horse-power."

Anyone who has been much around horses knows that you can get a lot more work out of a happy horse than you can out of an unhappy one. I recall how a well known dairy used to advertise the superior quality of milk from "contented cows." Surely the human race is justified in thinking that the variable of its imponderable, intangible potential is infinitely greater than that of the lower creatures of the earth. By the same token, not one of us would seriously question the obvious: that there is something over and above numerical strength to be figured into a manpower potential. It has shown itself, over and over again, in our growth as a nation. It has never been measured. It is the might of the spirit. It has become the hope of the world.

And with reason. Not quite ten years have passed since the day when, with the bulk of the American fleet at anchor in Pearl Harbor, eight battleships and ten other warships were sunk or damaged, and an enemy who had struck without warning or provocation was beginning the swift outflinging of



his armed aggression. All of us remember, and so does most of the rest of the world, how at the time of that outrage our industrial system was only in process of conversion to defense production; how manpower mobilization in a defense program was still in its fluid stages; how the American people were first stunned, then aroused; how, united, we braced, and went on to win. Great contributions were made by our older workers. It is too bad more detailed records of their performance were not kept for reference now. To them must go a large share of the credit when "the impossible" became history; when production goals which hard-headed experts had derided as "fantastic" were reached and passed, when we spoke of "miracles" and won the war with them.

That was Conservation, with a big "C." It was a people's effort, unified and coordinated, to put "primary emphasis on human values"; to "make maximum present use" of human resources which was "not incompatible with a continued use in the future." The pity of it is that, once the war was won, we permitted such high-level efficiency to sag.

As we entered and passed through those critical days of a decade ago, we found that our human resources were greater than we had known. They are still greater than we know. Can anyone, looking back, find reasonable ground for dispute with those who say that we have hardly begun to explore the possibilities of human achievement? For the third time in a lifetime, it has fallen to us to give proof to friends and enemies alike that American capacity to endure and to do, surpassingly, draws its life through a taproot sunk into the deep wells of the American ideal; the American concept of human rights divinely established, and so inseparable from the individual.

### *The Challenge*

And not only under the impulses of war or threat of attack. There, as I see it, lies the challenge to us all, as we seek together for solutions of the problems of aging. Looming larger and larger is the need for a shift in national outlook and a concert of endeavor to discover and develop ways by which to give greater opportunity for full enjoyment of individual liberties; full play to the capacities of all our people, for the good of all, at all times. Only so, it seems

to me, can we establish true democracy in an aging population. Only so can we build a truly sound economy and attain an enduring prosperity.

Only so, I submit, can we advance toward genuine conservation of our human resources. We are all people and we are all, each one of us, right now, aging. What we do for the good of our older people, now, we shall be doing for each one of us at some future day. We shall be doing it for the good of generations to come, the members of which, one day, and in mounting numbers, will make up the older group.

Our aging men and women of today have made contributions. All but a few have much still to give. True conservation demands that we remember always that they are human beings—whole human beings. They are our countrymen—whole citizens. They are entitled to whole citizenship. They are entitled to enjoy the fruits of the experience, skills, and wisdom that have come to them through the years. If we who are younger, deny them this, we shall be denying not only ourselves but those who come after us. We need what our older people have to give. It is ready to hand for our use. I, for one, am for any measure in line with our tradition that will mean the end of waste too long ignored; the opening of full opportunity where it has been too long denied. I am for maximum utilization of our older people. I am for conservation of our aging population.

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It is in the area of chronic disease that physical medicine and rehabilitation holds great implications for internal medicine, for probably three-quarters of the time of the average internist is spent on patients with chronic illness. The problems of acute, communicable disease that commanded our major attention a few decades ago have been replaced by the problems of chronic illness. Ironically, it was the outstanding achievements of the past three decades that created our present problems: what to do with chronic disease and disability in our aging population.—Rusk, H. A.: Chronic Diseases in an Aging Population, *Ann. Int. Med.* 33:1341 (Dec.) 1950.

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Chronic diseases in various forms—whether poliomyelitis, tuberculosis, cardiovascular disease, diabetes or any of the other abnormalities that are likely to alter a patient's social and economic activities—account for three fourths of all illness today. Progressive control of infectious diseases and the increasing number of elderly people in the population are bringing about a situation in which the chronic illnesses and preventive medicine may in the future demand the entire attention of physicians. Editorial, *New England J. Med.*, August 10, 1950.

## CARBON DIOXIDE THERAPY

GEORGE A. SILVER, M.D.

DURHAM

This is a preliminary report of 35 patients who received the so-called carbon dioxide treatment, consisting of 30 per cent carbon dioxide and 70 per cent oxygen inhalations, at Duke Hospital since January, 1951.

Treatment using various mixtures of carbon dioxide and oxygen is not new. This form of treatment by inhalation was introduced into psychiatry by Loevenhart, Lorenz, and Waters in 1926, and was used in the treatment of psychotic patients, particularly those with catatonic schizophrenia. The idea was that if no structural change in the brain existed, the disorder must be one of function, and that this disorder of function might be altered by biochemical or physiologic means.

Meduna<sup>(1)</sup> became interested in this work, but came to the conclusion that in psychotics a profound alteration occurred that was only temporarily benefited by the carbon dioxide-oxygen inhalations. In 1943 he began to use this type of treatment in psychoneurotic patients and found that 68 per cent were apparently cured or improved. He formulated a neurophysiologic theory of psychoneurosis<sup>(2)</sup> which, in essence, is that if the human organism constantly attempts to attain homeostasis and fails, reverberating circuits are set up within the nervous system, producing the psychoneurotic symptoms. He believed that the repeated administration of carbon dioxide cured these psychoneurotic conditions by permanently increasing the threshold of stimulation in the reverberating circuits and thus achieving homeostasis by turning positive feed-back circuits into negative feed-back circuits.

*Classification of Cases*

For purposes of clarification and evaluation, we have adopted the classification of psychoneurotic disorders used by Meduna:

1. Sympathetic reactions (involving frank symptoms of anxiety).
2. Parasympathetic reactions, including cardiospasm, spastic colitis, gastric ulcer, female frigidity, and male impotence.
3. Motor reactions, such as habit spasms,

tics, stuttering, and, in general, a hyperfunction or disfunction of the striated muscles.

4. Ideomotor reactions, in which behavior is directly related to a thought process, such as homosexuality, phobic states, alcoholism associated with feelings of inferiority or other anxieties, conversion hysteria, and profound invalid patterns.

*Results**Sympathetic reactions*

In the first group, the sympathetic or anxiety reactions, we had 8 patients. None of these patients is regarded as recovered clinically, but all report subjective improvement. A rather typical remark is: "I feel jittery for a few minutes (perhaps fifteen minutes), and then when that goes away I feel relaxed and don't worry anymore."

In this group was included one patient with *petit mal*. Following an illness of "black measles and pneumonia," this 16 year old white girl had had from thirty to sixty *petit mal* seizures a day from the age of 7 years, unchanged by any type of medication. It was believed that psychogenic factors contributed to the number of spells, and carbon dioxide treatment was begun. Throughout the course of treatment all anti-epileptic medication was removed, and after the thirty-fifth treatment the spells occurred on an average of twelve to fifteen a day. More noticeable to the patient, family, and friends was the shorter duration of these spells—"only momentary"; and occasionally the patient could tell when she was about to have a spell, could shake herself, and it would not occur.

*Parasympathetic reactions*

We had 4 patients with parasympathetic reactions. The striking improvement in 3 of these cases warrants description. A 25 year old white woman with frigidity and marked dyspareunia threatened divorce because of her distaste for sex. After the tenth treatment she was able to have orgasm and enjoy normal sex relations. Two patients had an allergic type of skin reaction that was relieved only temporarily by antihistamine. At last report they were completely relieved by carbon dioxide-oxygen treatment. The fourth, a patient with asthma still under treatment, reports, "I am 50 per cent better than when I started treatment and don't go all to pieces when I know I am going to have

<sup>1</sup>Read before the Section on Neurology and Psychiatry, Medical Society of the State of North Carolina, Pinehurst, May 9, 1951.

<sup>2</sup>From the Department of Neuropsychiatry, Duke University Hospital, Durham, North Carolina.



an attack." Clinically, this patient has as many attacks as before treatment, but they are less incapacitating.

#### *Motor reactions*

There were 6 patients in the third group. One patient with "writer's cramp" of eight years' duration stated that before treatment he was easily fatigued. After thirty-three treatments he was aware of a tenseness, "like nervousness on the surface," but felt that it was under control. He was able to continue writing throughout a very hard day, and was able to relieve the tightness in his hand by flexing the finger muscles.

Four other patients are stutterers. Clinically no improvement is manifest, although all state that they feel less tense. One, a graduate student who had had considerable speech training, felt himself going backward this year until he started carbon dioxide-oxygen treatment. Another mentioned that a friend and his mother thought he spoke much more easily, but he himself could see no change after twenty-eight treatments. The other patient, a 36 year old white woman with torticollis had seven treatments. Although "delighted at her improvement (relief of pain, relaxation of severe spasm, and ability to use her arms to feed herself for the first time in four months), she decided to go home to Florida, partly because of financial reasons, but mostly because she was "home-sick."

#### *Ideomotor reactions*

The fourth group is composed of a wide range of psychoneurotic conditions. A 26 year old married woman, an "expensive" invalid for five years, now after forty-five treatments is functioning more effectively than at any time before in her life. She is more stable emotionally, and, although she still has many of her original complaints, she is not greatly concerned about them. She has been able to assume her household duties, create other interests, learn to drive the car, and even make screens for the windows of her home.

A man of 32 came for examination following civil difficulties due to alcoholism. He had been the "biggest drunk of 1,800 men in college," and, although he had had eight months of psychotherapy two years ago, had not modified his pattern in any way. After thirty-four treatments he stated: "The compulsion to drink is gone." He has not been

on a drunk in four months, the longest period of abstinence in fifteen years, but does have a beer or so with friends quite naturally and without the feeling of limiting himself. This same man, a writer, had been unproductive for eighteen months before coming for treatment. He had many phobias, and was anxious, tense, and depressed. While under treatment he felt "relief," began to write, and recently had an article accepted by a leading literary magazine.

Of the 12 cases in this group of ideomotor reactions, 8 patients were objectively and subjectively improved. Three showed no improvement. The other patient was a woman of 40, hysterically blind for eight years, who received a pension on the basis of her blindness. She came to the hospital with the chief complaint of shooting pains in all her extremities (of some fourteen years' duration), stiffness and pain in all her joints, with increasing limitation of motion of some six months' duration. She was practically bedridden on admission. After the fourth carbon dioxide-oxygen treatment she reported considerable improvement and stated that she could distinguish shadowy figures. At the time of her discharge from the hospital after sixteen treatments she had gained in weight and strength, her vision had returned, and she was able to walk back to the ward unassisted. A fourth year medical student followed this patient in psychotherapeutic interviews throughout her hospital stay and at one to two week intervals after her discharge. He reported that she held the gain made in the hospital.

#### *Severe depressions*

Although Meduna, as had Loevenhart, Lorenz, and Waters, found that carbon dioxide-oxygen inhalations were of no lasting benefit in psychotic patients, five patients recognized as severely depressed were given a trial of carbon dioxide-oxygen. Several factors were elicited in the study of these patients that proved helpful in treating others whose symptoms were associated with some depression, but none of these five patients were benefited by the carbon dioxide-oxygen treatments.

#### *Method of Administration*

The treatments are easy to administer. A tank of the gas mixture made commercially costs about \$10.00, and is sufficient for about 100 treatments. A flow-meter and a mask

regularly used for the administration of anesthesia are the only other equipment required. The treatments are short, the total time varying from five to ten minutes unless combined with psychotherapy, which is not necessary in the average case. Meduna reports no contraindications to the treatment<sup>(3)</sup>, but I would be reluctant to administer the gas mixture to patients with severe cardiac or pulmonary disorders. Some caution should be exercised in the administration of the gas not to increase the distress of the depressed or anxious patient. The same might be said of the aggressive patient who is apt to have, early in the course of treatment, a violent motor reaction.

Reports from Jackman and Shorr show long lasting results<sup>(4)</sup>, and Meduna reports no relapse in some patients after a five year period. Our own period of working with the gas is too short to venture an opinion on this point, although several patients report improvement even after carbon dioxide-oxygen treatment is discontinued. "I can handle things better now."

None of our cases have had over fifty treatments, but 150 treatments on one patient have been reported. The criteria used is the continued improvement as felt by the patient. The number of inhalations varies with the patient, from twenty to forty on the average, although seventy and even ninety have been used at one treatment without ill effect.

#### Summary

Thirty-five patients were given carbon dioxide-oxygen inhalation. Five had recognized depression, and were not benefited. Among the 30 psychoneurotic patients, no cures can be reported at this time, although 3 patients believe themselves to be cured. Twenty-three patients were improved, and 4 patients were not benefited.

Carbon dioxide-oxygen inhalations are easy to administer, safe, inexpensive, and in our small series were effective in 86 per cent of the cases.

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#### Discussion

Dr. F. G. Hall (Durham): Dr. Silver has made

careful observations. It would be interesting to know if psychiatrists employing this therapy have influenced the patient by "non-directive psychotherapy" or other psychologic procedures used with the carbon dioxide therapy. Dr. Silver has probably kept this possibility in mind, for his report shows a critical examination of all his cases. He is wise in not administering high carbon dioxide mixtures to patients with severe cardiac and pulmonary disorders.

My general impression of Meduna's thesis for the rationale of carbon dioxide therapy is that it is veiled in many symbolic explanations. We certainly do not have a clear cut physiologic or biochemical explanation of the mechanism by which this therapy is effective. However, this does not mean that there may not be one.

### SUBACUTE BACTERIAL ENDOCARDITIS

#### *Clinical and Bacteriologic Correlation in a Stubborn Case Cured with Massive Chemotherapy\**

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The management of patients with serious infections often becomes extremely difficult when the organism involved has been exposed to prior chemotherapy. If the growth of the etiologic agent is suppressed by treatment, the diagnosis may be obscured; and if the organisms have lost their susceptibility to the most potent antibiotic agents, therapy may be difficult to design.

When an organism loses its susceptibility to a drug it is usually because relative drug-fastness has developed in the strain as the result of exposure to repeated short courses or inadequate doses of the drug. Treatment with small doses of a chemotherapeutic agent over short periods of time is frequently given for relatively minor complaints, usually in the upper respiratory tract, and most often of a recurring nature.

The problem of drug-fastness is especially important in the management of subacute bacterial endocarditis. Because this condition so frequently develops following upper respi-

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\*The aureomycin and the greater part of the penicillin used in this study were supplied by Lederle Laboratories Division, American Cyanamid Co., Pearl River, New York.



ratory infections, and particularly after manipulation of the teeth, the physician in charge of a patient with a known heart lesion will have to use keen judgment in deciding whether or not prophylactic chemotherapy should be given for a minor illness.

The following case is reported because it illustrates so many points which are fundamental in the treatment of infections.

### *Report of a Case*

A 30 year old traveling saleswoman, the divorced mother of two children, was first admitted to the North Carolina Baptist Hospital on March 18, 1949. Her general health had been excellent until five months before admission, when she began to have pain and tenderness in the left ankle and knee joints. These symptoms, which were aggravated by motion and associated with some redness of the joints, persisted for one week. No chills or recognized fever accompanied them. She was then asymptomatic until four months prior to admission, when she began to tire easily, and noted general malaise, apathy, and weakness. These symptoms were associated with low grade afternoon temperature and sporadic, severe frontal headaches.

She stopped work, and one month prior to admission consulted her family physician. He found her temperature to be 102 F., and gave her several injections of penicillin. Her symptoms improved temporarily, but during the three weeks prior to admission she had several more sporadic episodes of fever with temperature to 103 F. associated with general arthralgia, and malaise. There were no chills, but each bout of fever was accompanied by drenching night sweats. Penicillin injections were given for each episode of fever, and produced temporary improvement. The progressive course of the disease was not altered, however, and after a month of intermittent therapy with penicillin she was admitted to the North Carolina Baptist Hospital. She had lost approximately 25 pounds in weight during the course of her present illness.

There were no symptoms referable to the cardiovascular, respiratory, gastrointestinal or genitourinary systems. The past history revealed no symptoms of rheumatic fever or chorea. For ten years prior to her present illness she had had frontal and maxillary sinusitis, usually worse in the late winter and spring months. There were also frequent upper respiratory infections and sore throats, but no history of an operation or dental extraction preceding the present illness. The family and marital histories were non-contributory.

### *Physical examination*

The temperature was 102 F., the pulse 104, blood pressure 100 systolic and 60 diastolic, weight 145 pounds. The patient was well developed, well nourished, and in no acute distress; but she appeared chronically ill. No lesions or hemorrhagic phenomena were seen in the skin. The nasal septum was deviated to the left, and the mucous membranes were pale and boggy. Oral hygiene was excellent. The heart was normal to percussion, and had a regular sinus rhythm. Over the apex there was heard a loud, harsh, blowing systolic murmur which was transmitted to the axilla and along the left sternal border. This was preceded by a loud first sound. The second pulmonic sound was louder than the second aortic sound and was snapping in character. There was no diastolic murmur, or palpable thrill. The liver and spleen were not palpated. There was

no clubbing of fingers or toes. No venous engorgement and no pedal edema were present.

### *Accessory clinical findings*

The hemoglobin was 10.4 Gm., the red cell count 3,500,000, and the white cell count 8,100 with 72 per cent segmented and 11 per cent unsegmented polymorphonuclears. The corrected sedimentation rate was 32 mm. in an hour. A catheterized specimen of the urine was negative and a culture revealed no streptococci. A phenolsulfonphthalein test revealed 30 per cent excretion at the end of fifteen minutes, and 65 per cent excretion at the end of two hours. The nonprotein nitrogen was 30 mg. per 100 cc. Total serum proteins were 6.2 Gm. per 100 cc.—albumin 4 Gm., and globulin 2.2 Gm. The serum bilirubin was 0.6 mg. per 100 cc. The prothrombin time was 16.5 seconds, against a control of 15.8 seconds. The coagulation time was 10 minutes (Lee-White method).

An electrocardiogram revealed no evidence of myocardial disease. A fluoroscopic and film examination of the chest with a barium swallow revealed the lung fields to be clear; no enlargement of the cardiac chambers or displacement of the esophagus was noted.

Cultures of blood drawn on the first and second days were positive for alpha hemolytic streptococci.\* The plates contained 50 to 60 colonies per cubic centimeter. Sensitivity studies in broth and on agar media were done by the serial dilution method outlined by Meads and others<sup>(1)</sup>. The organism was resistant to penicillin in concentrations greater than 0.16 units per cubic centimeter and to streptomycin in concentrations greater than 20 micrograms per cubic centimeter. It was susceptible to aureomycin (0.25 micrograms per cubic centimeter) and to chloramphenicol (6.2 micrograms per cubic centimeter).

### *Course in the hospital*

Following the identification of the organism and the *in vitro* sensitivity tests, aureomycin was given intravenously in doses of 200 mg. every eight hours, with 10 cc. of leucine buffer as a vehicle. Because the supply of parenteral aureomycin was limited, the drug was given orally in doses of 6 Gm. per day (1.5 Gm. every six hours) after three days of intravenous therapy. Four transfusions of whole blood were given, and the hemoglobin rose to 14.8 Gm.

On the fifth day of therapy, a dull headache and moderate nuchal rigidity appeared. Lumbar puncture revealed a cell count of 18, with 16 polymorphonuclears and 2 mononuclears. No organisms were seen on smear, but culture revealed an organism similar in growth characteristics to that found in the blood, but susceptible to penicillin 0.04 units per cubic centimeter and to 0.5 micrograms of aureomycin per cubic centimeter. By the following day the meningismus had subsided, and two subsequent lumbar punctures revealed no growth. The patient was afebrile and her pulse rate was normal from the eighth through the thirty-eighth day of therapy.

During the period of oral therapy, blood levels of aureomycin were determined by a two fold serial dilution technique and by a modification of a three hour turbidimetric method<sup>(2)</sup>. Average concentrations three and four hours after each dose were 6.1 micrograms per cubic centimeter. Judging from the *in vitro* sensitivity tests, this level was thought to be adequate. It should be noted that during this period of clinical remission, blood cultures were obtained daily. Occasional cultures (nine in all)

\*All blood cultures made while the patient was in the hospital were planted with penicillinase.

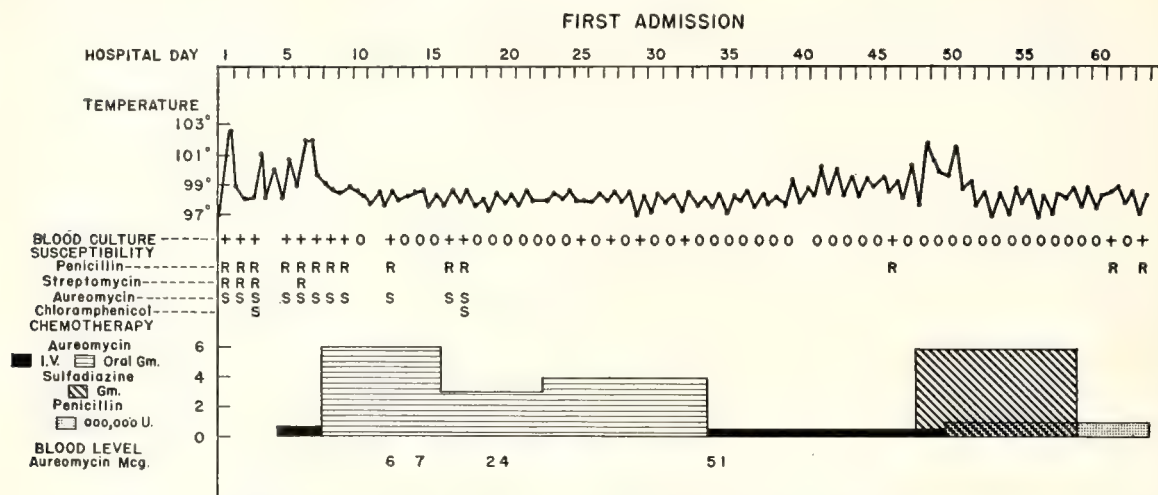


Fig. 1. Correlation of the temperature curve with bacteriologic studies in a case of bacterial endocarditis. The symbol † indicates one or more positive blood cultures on that day; the symbol O indicates one or more negative cultures on that day. The organism recovered from the blood was considered resistant (R) to penicillin if growth was not inhibited by 0.04 units per cc. Resistance to streptomycin was indicated by failure of inhibition at 20 micrograms per cubic centimeter. Susceptibility (S) to aureomycin indicates inhibition by concentrations of 0.5 micrograms per cubic centimeter or less; susceptibility to chloramphenicol is indicated by inhibition by 6 micrograms per cubic centimeter or less. (The results were charted to the closest whole number.) The overlapping of the symbols for chemotherapy at the right of the chart indicate combined therapy.

were positive, showing a growth of one to two colonies per cubic centimeter on pour plates.

Severe nausea and vomiting resulted from the oral administration of 6 Gm. of aureomycin per day. These symptoms could not be alleviated by the usual measures, including atropine, sedatives, and carminatives. The dose was therefore decreased to 3 Gm. per day (500 mg. every four hours), on the sixteenth hospital day, and the drug was enteric coated by our pharmacy. Toxic symptoms were then negligible. Since cultures remained intermittently positive, the dose was increased to 4 Gm. per day on the twenty-third hospital day, without the recurrence of toxic symptoms.

A new supply of parenteral aureomycin was obtained, and intravenous administration of the drug, in doses of 200 mg. every eight hours, was instituted on the thirty-fourth hospital day. Blood concentrations of 5 to 6 micrograms per cubic centimeter were obtained two hours after an injection. On the fortieth hospital day, because of thrombosis of all available superficial veins, a polyethylene tube was inserted into the right saphenous vein and a continuous drip maintained by alternating one liter of normal saline with two liters of 5 per cent glucose in water, 150 mg. of aureomycin being injected into the tube every six hours. Five days later the temperature began to fluctuate, reaching a height of 102 F. daily, with a concomitant elevation of the pulse rate to 120. Blood cultures during this time revealed no growth. In spite of anticoagulant therapy with heparin and Dicumarol, thrombophlebitis developed in the right calf, and the polyethylene tube was removed.

On the fiftieth day, aureomycin was discontinued, after penicillin and sulfadiazine were substituted. She received 1,000,000 units of aqueous penicillin intramuscularly and 6 Gm. of sulfadiazine orally per day. The hemoglobin, which had fallen to 9 Gm., was raised to 13 Gm. by a transfusion of 500 cubic centimeters of whole blood. It was maintained at that level without further transfusions.

During the last two weeks of hospitalization, the temperature and pulse were normal, and blood cul-

tures taken during this time had revealed no growth when the patient was discharged on the sixty-third hospital day. She had gained 6 pounds in weight during her hospital stay, and had no subjective symptoms other than despondency and emotional lability. There had been no signs of cardiac decompensation, and the functional capacity of her heart, according to the criteria established by the New York Heart Association, was judged as grade I<sup>(3)</sup>. The systolic murmur did not change in character, and the spleen was never palpated. The white cell count had ranged between 5,000 and 10,000 and the sedimentation rate had varied from 2 to 41 mm. in an hour, without relation to the clinical picture. Frequent urinalyses and urine cultures were never remarkable.

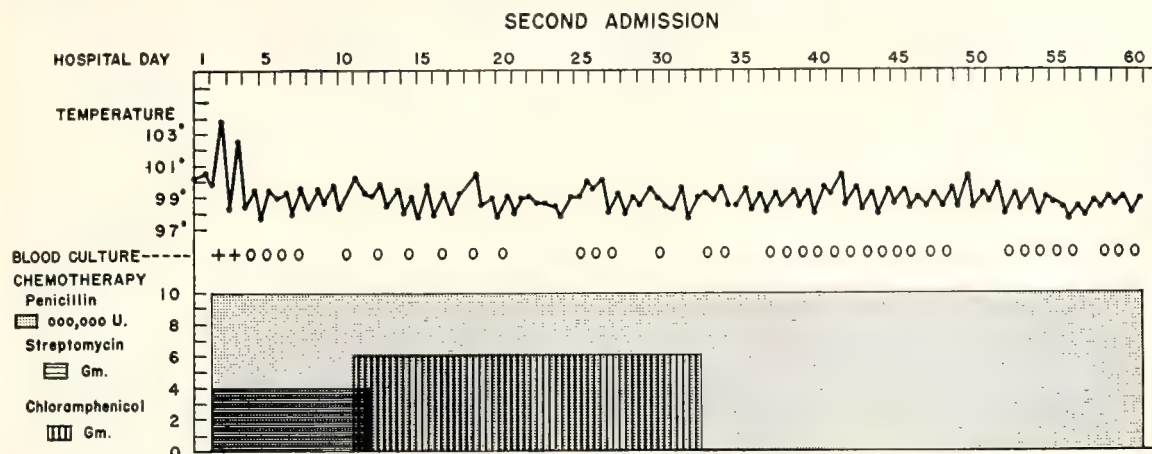
Five days following the patient's discharge, blood cultures which had been planted on the sixty-first and sixty-third hospital days were found to be positive, growth having been delayed.

#### Course at home

The patient was discharged on May 19, 1949, with instructions regarding modified activity, and was told to continue penicillin in the same dosage (1,000,000 units per day). In addition, iron and vitamin supplements were given. She felt very well for approximately one week, and then began to have fever (100-101 F.), with elevations in the pulse rate (95-100). Blood cultures taken at home were positive, showing a growth of a similar organism. Sulfadiazine in doses of 4 Gm. per day was again prescribed, and on June 7 the dose of penicillin was increased to 2.5 million units per day. She continued to have fever, however, and cultures remained positive.

Sensitivity tests with chloramphenicol revealed the organism to be susceptible to the drug in concentrations of 6.3 micrograms per cubic centimeter. Penicillin and sulfadiazine were discontinued, and chloramphenicol was given in doses of 4 Gm. daily on June 14. Despite this measure, the patient had step-like rises in temperature with daily chills. The temperature reached a height of 103 F., and hospitalization was advised.





During the two weeks prior to the second admission, subjective symptoms of decreased cardiac reserve appeared, and the functional capacity was lowered to grade III.

### Second admission

The patient was re-admitted to the North Carolina Baptist Hospital on June 26, 1949. Her temperature on admission was 100.4 F., her pulse 104, blood pressure 120 systolic and 75 diastolic, weight 156 pounds. She appeared pale and tired but not acutely ill. The general physical examination was essentially the same as on the first admission. The intensity of the heart murmur had increased, but it had not changed in character and again no diastolic murmur was heard. The spleen could not be palpated.

The blood count showed 8.3 Gm. of hemoglobin and 2,700,000 red blood cells. The other studies of the blood, urine and heart showed no essential change from the first admission. The vital capacity was 2.8 liters; circulation time from arm to tongue, tested with a 10 per cent solution of calcium gluconate, 18 seconds.

Blood cultures made on the second and third day were positive, showing 30 to 40 colonies of organisms per cubic centimeter. The cultural characteristics of these organisms were similar to those isolated on the first admission. Susceptibility tests revealed the organism to be resistant to penicillin in concentrations of 4.0 units per cubic centimeter, but sensitive to chloramphenicol (6.2 micrograms per cubic centimeter), streptomycin (6.2 micrograms per cubic centimeter) and aureomycin (0.5 micrograms per cubic centimeter).

On the second hospital day, the intramuscular administration of penicillin in daily doses of 10,000,000 units (1,000,000 units per injection), and of dihydrostreptomycin 4 Gm. daily (0.5 Gm. per injection), was begun. Because of the low functional capacity of the heart, persistent tachycardia, the increased intensity of the second pulmonic sound, and the apical systolic murmur, she was digitalized and then maintained on daily doses of 0.1 Gm. of digitalis.

After the fourth hospital day her temperature remained between 98.6 and 99.6 F., with sporadic elevations to 100 F. Blood cultures made after the second hospital day revealed no growth. Throughout this admission the pulse rate was very labile, fluctuating between 80 and 110.

Because of induration, tenderness, and the formation of sterile abscesses in the gluteal region, streptomycin was discontinued on the eleventh hospital day, and chloramphenicol in oral doses of 6 Gm. per day was substituted. This drug produced anorexia and nausea, but no vomiting. These symptoms subsided after discontinuance of chloramphenicol on the thirty-second hospital day.

After the other antibiotics were discontinued, blood levels of penicillin, determined by the serial dilution technique in liquid media, were 8 units per cubic centimeter one hour and 4 units 2 hours after a dose.

On the twenty-fifth and fifty-fourth hospital days, embolic episodes occurred. The first was characterized by local erythema of the medial aspect of the right ankle and pain on weight-bearing. The temperature rose to 100 F., and the pulse rate to 100. The second episode involved the second toe on the right foot, with reddening and pain over the terminal phalanx. Blood drawn at the time of these episodes was sterile on culture. The signs and symptoms subsided within twenty-four to forty-eight hours after each episode.

Throughout this admission, the patient had few complaints. The systolic murmur did not change in character or intensity, and the spleen was never palpated. Because of tachycardia and exertional dyspnea, she was maintained on digitalis and a low sodium diet. Accessory vitamins, ferrous sulfate and symptomatic therapy were given as needed. Periodic transfusions of whole blood maintained her hemoglobin at a level of 13.6 Gm. The white blood cell count fluctuated between 6,000 and 8,000, and the sedimentation rate never fell below 30 mm. per hour.

On the fifty-ninth hospital day (August 24, 1949) the patient was discharged with instructions to continue penicillin in doses of 10,000,000 units per day, as well as her other medications (digitalis, ferrous sulfate, and accessory vitamins). Modified activity was allowed. Her weight on discharge was 145 pounds.

### Twenty-two-month follow-up

Since blood cultures during the six weeks following discharge revealed no growth, the dosage of penicillin was cut to 2,000,000 units per day and continued through October, 1949 (four months after discharge). Numerous blood cultures made since that time have revealed no growth. During her entire illness she received a total of 1,051,000,000 units

of penicillin, 164 Gm. of chloramphenicol, 36 Gm. of dihydrostreptomycin, 130 Gm. of sulfadiazine, and 124 Gm. of aureomycin.

Digitalis was discontinued in January of 1950, and there are now no signs or symptoms of decreased cardiac reserve. Examination in May, 1950, revealed the heart to be smaller, with sounds of better quality and some lessening in the intensity of the systolic murmur. An electrocardiogram showed no significant change. At the present time she is taking no medication except ferrous sulfate and has no objective or subjective disability. The sedimentation rate, hemoglobin, white cell count, and differential count are within normal limits (June, 1951).

It should be noted that in February, 1950, she had an episode of nasal stuffiness with purulent post-nasal drip, cough, and frontal headache, accompanied by low-grade fever. This was treated satisfactorily with antihistaminics and 2,000,000 units of penicillin per day for six days.

### *Comment*

The interval of five months before the diagnosis was established in this case is not unusual. The organism must have been one of low virulence and low invasiveness, to judge from the slow progression of the disease and the fact that complications were not too serious. The variability of the organism in its growth characteristics and its susceptibility to antibiotics made it difficult to decide whether it was an enterococcus which had entered from the gastrointestinal or urinary tract, or an alpha hemolytic streptococcus from the respiratory tract. The absence of symptoms suggesting diminished cardiac reserve failed to call attention to the heart as a source of infection at the beginning of the illness.

The slow sedimentation rate on admission, coupled with the low leukocyte count, added further difficulty to the diagnosis. The relatively benign meningitis was probably a further reflection of the low virulence and low invasiveness of the organism. The organism grown from the spinal fluid reflected the tendency of the parent organism to mutate and to vary in its sensitivity to antibiotics as well as in its colony characteristics.

The slow rate of growth of the organism when it was first isolated probably resulted from the sporadic therapy with penicillin for the symptoms of sinusitis. A similar slow growth was noted in cultures made just before the patient's discharge. Very few organisms appeared in the last positive cultures; in fact, on one culture only a single colony grew out several days after the patient had left the hospital. The symptoms of sinusitis were probably aggravated by some degree of hypersensitivity to the infecting organism. It should be recalled that naso-

pharyngeal allergy to molds may also be present, and that symptoms may be caused by the administration of antibiotics derived from molds.

### *Treatment*

#### *Chemotherapy*

The selection of a chemotherapeutic agent must be based on a consideration of many factors. Penicillin in moderate to high concentrations may be bactericidal to organisms which are only inhibited by lower concentrations. Bactericidal concentrations seemed to have been achieved intermittently by the high doses of penicillin given to this patient. Streptomycin, under certain conditions, may also be bactericidal. Aureomycin and chloramphenicol, on the other hand, are predominantly bacteriostatic drugs. These facts, together with the knowledge of the relative toxicity of the drugs, the cost, and the total dose required, should be considered along with the results of the laboratory studies on the susceptibility of the organism involved, in planning chemotherapy.

In endocarditis the effectiveness of the chemotherapeutic agent is dependent upon its ability to penetrate into heart valves, and this ability in turn depends upon a high level of the drug in the serum, and the maintenance of this level over a period of time. In certain types of infection, intermittently high levels or peaks superimposed upon a constant but lower level are desirable. Such peaks were obtained by the intermittent intravenous administration of aureomycin and by the use of a penicillin preparation which combined the slow acting and the rapidly absorbed form of the drug. High levels of penicillin may also be obtained by the simultaneous administration of drugs which block the enzymatic transport of the antibiotic across the renal tubules and hence inhibit excretion. Such a drug, caronamide, was tried on the case presented, but the rapid appearance of red blood cells in the urine necessitated its immediate withdrawal<sup>(4)</sup>. Newer drugs with fewer toxic manifestations, such as Benemid, are now available and give promise of having a useful place in the treatment of such cases<sup>(5)</sup>.

Combined therapy with two different antibiotic agents in the usual doses often is found more effective than high doses of a single drug. For example, it has been reported that enterococcal infections will respond to the simultaneous administration of penicillin and streptomycin, when neither drug



alone is effective<sup>(6)</sup>. In the case reported here, a short course of streptomycin was given on the second admission. The period of its administration was so brief in relation to the total duration of treatment with penicillin, however, that it seems unlikely that this synergistic effect was responsible for the cure.

We feel that the infection was cured by the prolonged high levels of penicillin. Since resistance to penicillin develops gradually, drug-fastness should be considered as a relative phenomenon. Evidence has been presented which suggests strongly that drug-fastness originates independently of antibiotics through spontaneous mutation of the bacteria; the antibiotic acts only as a selective agent, suppressing the growth of susceptible organisms and allowing the rare mutant to grow<sup>(7)</sup>. Resistance to the action of penicillin usually develops in a series of small steps. A high degree of resistance to streptomycin may develop either gradually or in a single step. That a moderate degree of drug-fastness can be effectively overcome by massive chemotherapy is well illustrated by this patient's course during her second admission.

An interesting speculation is the possibility that cure may have been delayed by the simultaneous administration of chloramphenicol and penicillin; it has been reported that chloramphenicol has an antagonistic effect on the bactericidal action of penicillin if its administration precedes the dose of penicillin<sup>(8)</sup>.

The interpretation of *in vitro* tests of susceptibility is often difficult. This difficulty is illustrated in the present case by the fact that aureomycin and chloramphenicol—both of which, according to *in vitro* tests, appeared to be effective at the levels attained in the blood—failed to produce a cure<sup>(9)</sup>. The size of the inoculum and the pH of the media required for *in vitro* testing, as well as variations in the extent antibiotics are inactivated by protein, all affect the results of the tests. The rapid destruction of aureomycin *in vitro* makes interpretation of susceptibility tests and blood levels difficult. Furthermore, *in vitro* testing as it is usually performed does not take into account the immune mechanism of the host. In the eradication of an infection, inhibition of the growth of organisms by chemotherapeutic agents is only part of the story. The immune bodies produced by the host and the phagocytic activity of the

white cells and reticulo-endothelial cells are equally important.

Treatment with chemotherapeutic agents, particularly antibiotics, may be extremely difficult in an allergic individual. Signs of intolerance to antibiotics must be carefully evaluated, in order to differentiate local symptoms of little significance (such as the nausea and vomiting observed after oral administration of aureomycin) from more serious toxic manifestations. Minor symptoms may often be controlled by spacing the doses, coating the drugs, administering them with food, and other simple measures. Materials (such as kaolin and amphoteric aluminum hydroxide) which tend to absorb substances given simultaneously should be used with caution. The relief of gastrointestinal symptoms following their use is the result of fecal excretion of the adsorbed antibiotic so that its absorption from the intestine is reduced; the therapeutic effect is thus diminished. More pronounced manifestations may be controlled by the simultaneous administration of antihistaminic drugs, as was done in the case reported. The sore mouth, tongue, or rectum sometimes seen after administration of the newer antibiotics may be controlled or lessened in severity by simultaneously giving whole vitamin B complex parenterally. The speed with which these symptoms appear following either intravenous or oral administration is too rapid to be explained by inhibition of vitamin synthesis in the bowel by reduction in the number and change in the bacterial flora. The symptoms must be a reflection of a more basic interference with utilization by body cells of some component of the B complex which produces lesions reminiscent of pellagra. Symptoms of intolerance can often be allayed by reducing the dose of a drug, but this measure often defeats the purpose of therapy.

#### *Supportive therapy*

The need for attention to supportive measures is shown by the necessity for transfusion in this case. During the first admission alone two transfusions were required to replace blood taken for blood cultures, assays of antibiotic concentration, and blood chemical determinations.

The diet should be relatively high in protein to compensate for exhaustion of protein stores from the increased metabolism of fever as well as the destruction of tissues by embolic infection<sup>(10)</sup>. The intake of all vita-

mins, particularly those stored with protein, should be increased, especially if antibiotics are being administered.

### *Complications*

Once the diagnosis is established, therapy should be as vigorous as possible, in order to prevent the development of cardiovascular, renal, or cerebral complications. The tendency for congestive failure to develop as the disease continues unabated is well illustrated by the present case. The fact that the character of the murmur changed very little suggests that the diminished function resulted from myocarditis caused by multiple tiny emboli rather than from an increase in the defect on the valve. The gradual improvement in function which took place during convalescence, after the infection was arrested, offers further support to the impression that embolic myocarditis rather than a valvular defect was the cause of the mild congestive failure.

Embolic nephritis was not a problem in this case. The slight elevation in the non-protein nitrogen noted as the disease progressed probably resulted from the embolic destruction of glomeruli and from an increase in interstitial fibrosis between renal tubules.

The meningitis was a reflection of tiny metastatic lesions to the brain or meninges. Because of the small size of the lesions and the susceptibility of the organisms recovered from the spinal fluid to the antibiotics used, the meningitis subsided promptly, without necessitating intrathecal therapy.

Venous spasm, pain, or other evidence of local irritation are often the first warning of an impending thrombophlebitis. Thrombophlebitis may result from the altered coagulability of the blood seen in many infections, or may be caused by chemotherapeutic agents. The routine use of anticoagulants in endocarditis to prevent further deposition of fibrin on the vegetation in the heart or to prevent phlebothrombosis has proved too dangerous. Complications such as cerebral vascular accidents are frequent in cases of endocarditis treated with anticoagulants. In the present case, the administration of procaine and of drugs which block autonomic nervous impulses (such as Etamon) was relatively ineffective in controlling the symptoms of local irritation and of thrombophlebitis during the intravenous administration of aureomycin.

Embolic phenomena vary in prominence with different cases. The tender joints noted five months before admission as the initial manifestation may have been due to emboli. The two embolic episodes described during the second admission were probably due to the breaking off of superficial portions of the vegetations as the heart valves were repaired at the endothelial surface. Blood cultures taken as soon as embolic symptoms appeared were sterile, and no local signs of inflammation suggesting abscess formation appeared. Embolic phenomena of this type may appear after chemotherapy is discontinued; it is then often difficult to determine whether the emboli reflect healing or whether a relapse is imminent.

### *Summary*

1. In a stubborn and protracted case of subacute bacterial endocarditis, eventual cure was produced by massive doses of penicillin after aureomycin, chloramphenicol, streptomycin and sulfadiazine, singly or in combination with penicillin, had failed.

2. The dangers of inducing drug-fastness in organisms by treating minor symptoms with chemotherapeutic agents is emphasized.

3. Drug-fastness to penicillin, and probably to aureomycin and chloramphenicol, is a relative phenomenon and may be overcome by massive or combined chemotherapy.

4. *In vitro* sensitivity tests and blood levels serve as a rough guide to therapy.

5. In a disease which is prone to produce serious damage to the myocardium, kidneys and central nervous system, vigorous treatment with specific chemotherapy and with meticulously planned supportive therapy should be instituted at the earliest possible moment, revised as complications arise, and pursued until cure is definitely assured.

6. The leukocyte count, erythrocyte count, sedimentation rate, and temperature curve may all be misleading in determining activity of the infection; in the present case the symptoms of the patient proved the best prognostic guide.

7. Embolic episodes which occur during a period of clinical and bacteriologic remission do not necessarily alter the prognosis or hinder the ultimate outcome.

### *Conclusion*

This case illustrates the importance of accurate diagnosis in patients with known heart lesions before therapy is instituted. It



is now well recognized that inadequate courses of chemotherapy will alter the nasopharyngeal flora, allowing relatively resistant organisms to persist<sup>(11)</sup>. Fortunately, the resistant organisms are often replaced by the normal flora after the drug is withdrawn. The increasing frequency with which drug-fast strains are found in random cultures of the respiratory and genitourinary tracts, however, indicate that this problem is more than an academic one and is becoming one of clinical importance.

The development of potent chemotherapeutic agents has resulted in the appearance of a new syndrome—healed bacterial endocarditis. As the damaged heart valve is repaired the scar tissue contracts, increasing the valvular defect. More and more patients are now dying from cardiovascular or renal failure weeks to months after a bacteriologic cure of the infection has been produced.

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In a world in which cooperation on the political level seems at present an unrealizable dream, it is heartening to recall that it has existed for a long time in the field of health. Widespread public health is both an instrument and a condition of any lasting peace. Dr. F. W. Behmler, Minnesota's Health, October, 1950.

## THE DIAGNOSIS OF MUMPS MENINGOENCEPHALITIS

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Meningoencephalitis is a common complication of mumps which when present without parotid swelling is difficult to diagnose. The history of exposure to mumps, with the development of lethargy, headache, vomiting, and nuchal rigidity in a patient whose spinal fluid contains a high leukocyte count, of which at least 90 per cent are mononuclear cells, strongly suggests the presence of mumps meningoencephalitis. The spinal fluid white cell count often exceeds 200 per cubic millimeter, and the protein content of the fluid may be elevated. The diagnosis can be made with certainty only by examination of serum taken during the active and convalescent stages, or by the isolation of the mumps virus. Mumps complement fixation tests or inhibition of hemagglutination may be carried out on the sera thus obtained, and if there is an increase in complement-fixing antibodies or in antihemagglutinins, the diagnosis is considered established.

### Diagnostic Tests

Kane and Enders first used the complement fixation test for the study of mumps<sup>(1)</sup>. Henle, Henle, and Harris have used two antigens, S and V, for the mumps complement fixation test<sup>(2)</sup>. Antibodies to the S antigens usually appear first and disappear within six to twelve months. The anti-V antibodies appear later, but tend to remain at a level of 1:4 or 1:8 throughout life in a person who has had mumps.

Henle and McDougall demonstrated the ease in which the virus can be isolated from the spinal fluid<sup>(3)</sup>. In twenty-one attempts to isolate the mumps virus from patients with clinical mumps meningoencephalitis, Kilham was successful in all cases<sup>(4)</sup>. The positive serologic tests and the isolation of the virus were thus correlated, and the serologic tests alone seem adequate to make a definite diagnosis in most instances. The demonstration of the development of mumps antibodies by changes in the reaction of the patient's skin to the mumps antigen may also prove helpful in the recognition of the disease.

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\*The complement fixation tests were done by the Public Health Service, Communicable Disease Center of Montgomery, Alabama.

### Case Reports

The following case reports demonstrate the similarity of clinical and laboratory data in these patients and the ease with which the correct diagnosis can be made even in small communities.

#### Case 1

A 6 year old white male was seen on March 30, 1950, because of headache and vomiting of twenty-four hours' duration. His temperature had been elevated to 103 F. the previous night. He had been exposed to mumps seventeen days previously, but had no parotid or submaxillary swelling. There was no past history of mumps. Tonsils and adenoids had been removed at age of 4 years. Two teeth had been extracted four months previously, and the upper central incisors are now in the process of erupting. His hearing had been poor for several years.

Physical examination revealed a well developed and well nourished white male who appeared apprehensive but not severely ill. His temperature was 104 F. The skin was dry but clear. Examination of the eyes showed the vision to be good, the pupils not dilated and responsive to light, and the fundi normal. The tympanic membranes of the ears were scarred and retracted, and hearing was decreased bilaterally. There was no nasal obstruction. The upper central incisors were erupting. There was no parotid swelling or cervical lymphadenopathy. Heart and lungs were normal. The abdomen was flat, and there was no enlargement of the liver or spleen.

Neurologic examination disclosed no evidence of muscle weakness or cutaneous sensory changes. The tendon reflexes were active and equal. When the patient was lying on his back, flexion of the neck forward was resisted, and when sitting with the legs extended he assumed a "tripod position." Passive leg raising produced pain in the back, but there was no evidence of muscle tenderness.

Laboratory findings on admission were: hemoglobin 12 Gm.; white blood count 6,200 per cubic millimeter, of which 67 per cent were polymorphonuclear neutrophils, 32 per cent were small lymphocytes, and 1 per cent were monocytes. The spinal fluid was clear, and flowed freely. The Pandy test was reported 1 plus. White cell count of the spinal fluid was 400 per cubic millimeter. All cells were mononuclear. Spinal fluid chlorides were not determined, and the spinal fluid sugar was within normal range.

The patient received no chemotherapy or antibiotics and the following day seemed much improved. His headache was gone, but his temperature was 104 F. The body temperature spiked daily to 103 or 104 F. until the sixth hospital day, when it returned to normal. On this day his spinal fluid was again examined and found to contain 100 white cells per cubic millimeter: 98 were mononuclear and 2 were polymorphonuclear. The Pandy test showed a trace. The patient appeared well, and when examined in the office ten days after discharge from the hospital showed no evidence of muscle weakness or stiffness of the back or neck.

Two blood samples were taken for mumps complement fixation. The first specimen was obtained on admission and the other five weeks later. The first sample was destroyed in transit to the laboratory, but the convalescent serum gave a positive complement fixation in a 1:16 dilution.

#### Case 2

A 4½ year old white male was seen April 21, 1950, because of elevated temperature, vomiting,

and severe headache for the past twenty-four hours. A history of bilateral parotid swelling occurring one week ago was obtained. There was no complaint of muscular pain or weakness.

Physical examination revealed a well developed white male who appeared alert but acutely ill. His temperature was 102 F. His skin was clear of rash. The eyegrounds appeared normal, and eardrums showed no inflammation. The nose and mouth appeared normal, and there was no evidence of recent tooth extraction or operation on the nasopharynx. The heart and lungs were thought to be normal. There was no enlargement of the liver or spleen. There was no generalized lymphadenopathy or evidence of parotid or submaxillary swelling.

Neurologic examination disclosed no evidence of muscle weakness or cutaneous sensory changes. The tendon reflexes were active and equal. When sitting on a hard, flat table with legs extended, the boy was able to lean forward and touch his toes, but was unable to place his forehead on his knees. When lying on his back, he could bring his head forward until his chin touched his chest without producing pain. Leg raising test was thought to be normal.

Laboratory findings showed the hemoglobin to be 11 Gm., white blood count 8,400 per cubic millimeter, of which 59 per cent were lymphocytes, 4 per cent monocytes, and 27 per cent polymorphonuclear cells. The spinal fluid was clear, the pressure not taken. The white cell count of the spinal fluid was 600 per cubic millimeter. Five hundred and eighty of these cells were mononuclear, and 20 were polymorphonuclear. The Pandy test was slightly positive, and the sugar content normal. Total protein and chloride determinations were not done on this fluid.

No medication was given. The day following admission the boy appeared greatly improved, and his temperature was 100 F. Forty-eight hours later his temperature was normal, and he was apparently well. Follow-up examination, one week later, revealed him to be in good health. His tuberculin test (1:1000) was negative at that time.

Mumps complement fixation tests were not done, but this patient is included in this group because the history of parotid swelling and laboratory findings leave little doubt that he had mump meningoencephalitis.

#### Case 3

A five year old white male was first seen June 17, 1950. His present illness had begun one week previously with a small swollen gland below the right ear. He was treated by his physician for otitis media and cervical adenitis. He responded somewhat to sulfonamide therapy, but two days before admission his temperature became elevated. He also started vomiting and complaining of headache.

He had no past history of mumps, but had been exposed to the disease three weeks previously. He had had two teeth pulled one week previously.

Physical examination revealed a well developed slightly undernourished white male who appeared acutely ill. His temperature was 103 F. No rash was present. The pupils were not dilated; the fundi were normal. The tympanic membranes were not inflamed. There was no nasal obstruction. The tonsils were present. The upper central incisors were missing. There was no swelling of parotid or submaxillary glands. Heart and lungs were thought to be normal. There was no enlargement of the liver or the spleen. There was no generalized lymphadenopathy.

Neurologic examination disclosed no evidence of muscle weakness or cutaneous sensory changes. The tendon reflexes of the extremities were active and equal. The neck was not stiff. When sitting on flat table with the legs extended, the patient was



unable to touch his knees with his forehead. Passive leg raising was resisted.

Laboratory findings showed the hemoglobin to be 12 Gm. and the white blood count 9,200 per cubic millimeter, of which 36 per cent were lymphocytes, 2 per cent monocytes, and 62 per cent polymorphonuclear neutrophils. The spinal fluid obtained on admission was clear, and the pressure was slightly elevated. The white cell count of the spinal fluid was 800 per cubic millimeter, all of which were mononuclear cells. The Pandy test was slightly positive. Spinal fluid sugar was 60 mg. per 100 cc.

The patient received marked symptomatic relief following removal of 6 cc. of spinal fluid on the day of admission to the hospital. No medication was given.

His temperature returned to normal on the third hospital day. Spinal examination done one week after onset revealed no increase in the white cell count. Tuberculin test was negative. The mumps complement fixation test done on the serum obtained from the patient on the first hospital day was positive in a 1:8 dilution. The test performed on serum obtained from the patient six days later was positive in a 1:16 dilution.

Follow-up examination of the patient was negative, but his brother and father had mumps two weeks after child was discharged home.

#### Case 4

A 14 month old white male was seen on July 1, 1950, because of vomiting and fever of one day's duration. The baby was very fretful. This infant had been exposed to his aunt who had mumps, and her son had had mumps two weeks earlier. There was no history of injury to the mouth.

Physical examination revealed an infant with flabby musculature who was irritable but not severely ill. His temperature was 103 F. The anterior fontanelle was flat. Eyes, ears, and nose appeared normal. Twelve teeth were present, and none was in the process of erupting. The orifice of Stensen's duct showed no inflammation. Heart and lungs were thought to be normal. The spleen was not palpable. There was neither generalized lymphadenopathy nor parotid or submaxillary swelling. The testes had descended into the scrotum.

Neurologic examination disclosed no evidence of muscle weakness or cutaneous sensory changes. The tendon reflexes were active and equal. The neck was slightly stiff. There was no evidence of muscle tenderness.

Laboratory findings on admission were: hemoglobin 10 Gm., white blood count 6,200 per cubic millimeter, of which 58 per cent were lymphocytes and 42 per cent were polymorphonuclear neutrophils. Spinal fluid was clear, with a white cell count of 250 per cubic millimeter, of which 248 were mononuclear and 2 were polymorphonuclear. The Pandy test was slightly positive. Spinal fluid chloride was reported to be 680 mg. per 100 cc. Spinal fluid sugar was not decreased.

Although sedatives and aspirin were administered, the temperature spiked to more than 104 F. daily for four days. The day after admission bilateral parotid swelling was found to be present. The spleen was also palpable. After the fourth day the temperature returned to normal, and the infant made an uneventful recovery.

Mumps complement fixation tests were not done, because diagnosis was confirmed by the appearance of bilateral parotitis.

#### Case 5

An 8 year old white male was seen December 1, 1950, because of sore throat and fever of three days' duration. Severe headache and vomiting had occurred twenty-four hours before admission. His

family physician found his neck and back to be stiff, and discovered that the left tympanic membrane was acutely inflamed. The child received sulfonamide drugs, penicillin, and aureomycin without responding, and was sent here with the diagnosis of possible meningitis. There was no past history of mumps, but a classmate of this child had had mumps two weeks earlier. The patient had had no teeth pulled in the past year, and there had been no operation on the nose or throat of this child.

The family history revealed that an aunt had active tuberculosis, and had recently been taken to a sanatorium for treatment.

Physical examination revealed a well developed dehydrated white male who appeared acutely ill. His temperature was 103 F. The skin was clear. Examination of the eyes showed the pupils to be equal and the fundi normal. The eyeballs were soft and appeared sunken. The right tympanic membrane appeared normal. The tympanic membrane on the left was inflamed and slightly bulging. There was no nasal obstruction. The tonsils were present. There was no swelling of the parotid or submaxillary glands. The heart and lungs were normal. There was no enlargement of the liver or spleen, and no abdominal tenderness.

Neurologic examination disclosed no muscle weakness or cutaneous sensory changes. The tendon reflexes of the extremities were active and equal. The neck was stiff. When the patient sat with his legs extended, he was unable to touch his toes or put his head forward to touch his knees with his forehead. Leg raising was resisted.

Laboratory findings on admission were: hemoglobin 11 Gm., white blood count 9,900 per cubic millimeter, of which 29 per cent were small lymphocytes, 1 per cent monocytes, and 70 per cent polymorphonuclear leukocytes. The spinal fluid was clear, and the pressure was 110 mm. of water. Acid fast and gram stains on the fluid were negative. Spinal fluid culture was negative. The white cell count on this fluid was 351 per cubic millimeter, of which 348 were mononuclear and 3 were polymorphonuclear cells. Roentgen examination of the chest showed no evidence of tuberculosis. Roentgenograms of the skull revealed no abnormalities. The tuberculin skin test and blood Kahn tests were both negative.

The boy received intravenous fluids, and was given penicillin for the severe otitis media present. No other medication was given. The course in the hospital was one of gradual improvement. By the fourth hospital day he had become more alert, his headache had disappeared, and he had begun to eat well.

On the seventh hospital day the spinal fluid was again examined. The fluid was clear, and the white cell count was 220 per cubic millimeter, of which 119 were mononuclear. Only 1 was polymorphonuclear. The protein content was 34 mg. per 100 cc., the chloride content 720 mg. per 100 cc., and the sugar 61 mg. per 100 cc.

The patient was discharged, apparently well, on the eighth hospital day, and when examined one week later showed no abnormal neurologic findings.

Three blood samples were obtained for mumps complement fixation tests. The first sample was taken the day of admission, and no complement fixing antibodies were present. The second specimen was taken on the eighth hospital day, and a titer of 1:64 was found. The last sample was obtained one week later, and the titer was found to be 1:32.

#### Comment

All five patients gave a definite history of exposure to mumps parotitis two or three

Table 1  
Onset of Meningoencephalitis

Case No.	Age of Patient (years)	Onset After Exposure to Mumps (weeks)	Parotid Swelling
1	6	2½	None
2	4½	3	1 week previous
3	5	5	None
4	1.2	2	Day after admission
5	8	3	None

weeks before the onset of meningoencephalitis. None of the patients had evidence of parotitis at the time of first examination, but one patient (case 2) had a history of parotitis one week previously, and another patient (case 4) developed bilateral parotid swelling the day after admission to the hospital. All patients had fever and vomited. Four patients complained of severe headache, and the other patient (case 4) was an infant who screamed and rolled his head as if in pain. The degree of nuchal rigidity was not great in these patients. Only two had stiffness of the neck, but none was able to lean forward and place his forehead on his knees.

These patients resembled children with early poliomyelitis except for the absence of muscle tenderness. The apprehension was not great, and no reflex changes or muscle weakness could be demonstrated.

Only one patient (case 5) appeared to be seriously ill, and this illness was thought to be due in part to dehydration and acidosis. The diagnosis of tuberculosis was considered in this patient because of his exposure to this disease. The normal spinal fluid sugar and chloride, and negative tuberculin test, helped to exclude this diagnosis. Improvement without the use of streptomycin also made tuberculosis meningitis unlikely. The possibility of meningeal irritation secondary to severe otitis media, poliomyelitis, lymphocytic choriomeningitis, and other forms of encephalitis could not be excluded on the basis of physical or spinal fluid findings. The increase in mumps complement fixation antibodies confirmed the clinical impression of mumps meningoencephalitis.

As emphasized by Kilham<sup>(5)</sup>, the most characteristic changes in the spinal fluid (table 2) is the rather high leukocyte count, with a large percentage of mononuclear cells. The spinal fluid cell counts done in the early stages of the disease revealed the lowest to be 250 per cubic millimeter; the highest,

Table 2  
Spinal Fluid Cell Count

Case No.	Days after Onset	White Cells per cubic millimeter	Percent mononuclear cells
1	1	400	100
	5	100	98
2	2	600	96
3	1	800	100
	8	0	0
4	1	250	99
5	3	351	99
	9	220	99

800 per cubic millimeter. At least 96 per cent of the leukocytes were mononuclear cells. These findings are similar to those reported by Kilham and others, who also found that the total protein was elevated in the spinal fluid of most of his patients with mumps meningoencephalitis. Only 1 patient in this group had the total protein in the spinal fluid determined, and the values were found to be elevated.

It is of interest that one patient (case 3) had two teeth extracted during the incubation period of mumps, and one patient (case 1) had teeth in the process of erupting. There had been no operations on the nose or the throat of the other 3 patients. The first 4 patients became ill in the late or early summer, when the incidence of mumps meningoencephalitis without parotitis has been reported to be the highest.

The withdrawal of spinal fluid relieved the headache and vomiting in all patients. The temperature elevation was not lowered by the lumbar puncture, but returned to normal by the sixth hospital day in all five cases. Aspirin and barbiturates were used when necessary for restlessness.

A recent communication from Dr. Paul Hendricks of Kings Mountain stated that he was treating a colored female, age 12 years, who had mumps meningoencephalitis. She had had bilateral parotid swelling one week before onset of headache, vomiting, and stiff neck. Spinal fluid examination revealed a clear fluid, with 351 white cells per cubic millimeter. Three hundred and forty seven of these cells were mononuclear, and 4 were polymorphonuclear. The total protein of the spinal fluid was 45 mg. per 100 cc. The mumps complement fixation test done on the serum obtained during convalescence was positive in a 1:64 dilution. This makes the sixth case of mumps meningoencephalitis in Gaston County during the past 12 months.



### Summary and Conclusions

1. Five patients believed to have mumps meningoencephalitis without parotitis are presented.
2. The diagnosis should be suspected in all patients who give a history of recent exposure to mumps, and who later develop evidence of meningeal irritation. The spinal fluid changes are suggestive, but not conclusive. Correct diagnosis can be established by physicians in even the smallest communities if they will obtain serum in the acute and convalescent periods and send it to one of the communicable disease centers for mumps complement fixation tests.

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## THE MANAGEMENT OF STASIS DERMATITIS AND STASIS ULCER

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Stasis dermatitis and stasis ulcers of the lower extremities are common disorders in the older age group. By the time these patients are referred to the dermatologist, the condition has often been aggravated by overtreatment. Because patients with these disorders frequently present themselves to the general practitioner, the surgeon, and the internist, and because of the therapeutic problems they present, it is useful to review some principles of therapy, with emphasis on avoiding overtreatment.

### Etiologic Diagnosis

The physician's first task when confronted by a problem in circulatory stasis of the lower extremities is to determine if possible the reason for the condition.

1. *Varicose veins* lead the list of etiologic factors. The diagnosis is usually obvious, although it must be borne in mind that ede-

ma of an extremity can hide underlying varicosities. The outward appearance of the veins does not necessarily parallel the severity of the stasis dermatitis, induration, or ulceration of the leg. In all patients with varicose veins, tests should be done to determine the competency of superficial, communicating, and deep veins<sup>(1)</sup>.

2. *Post-thrombophlebitic edema* is another common etiologic factor.

3. *Arteriosclerosis* and *thromboangiitis obliterans* are the more common causes of arterial obstruction. Arterial competency is usually determined by palpation of the dorsalis pedis and posterior tibial arteries. Oscillometric studies and skin temperature studies may be helpful in the diagnosis of arterial disease. The study of patients should include urinalysis and blood sugar counts, if necessary.

4. *Local trauma and infection*, either bacterial or mycotic, frequently play a secondary role. Many persons may have adequate circulation in the lower extremities until trauma and/or infection induces edema and, not infrequently, dermatitis and ulceration.

5. *Chronic congestive cardiac failure* from any cause can produce edema and circulatory stasis in the lower extremities.

6. The possibility of *arteriovenous fistula* should be kept in mind. The common sites are the femoral triangle (femoral artery and vein) and the popliteal space (popliteal artery and vein). There may or may not be a history of trauma. Auscultation and the presence of a continuous bruit, with systolic accentuation, may confirm this diagnosis. Multiple congenital aneurysms may be present, and are frequently missed because they do not produce a bruit. The determination of blood pressure in the lower extremities is helpful. Arteriograms, when available, can also establish this diagnosis<sup>(1b)</sup>.

7. Other conditions that need be considered are *lymphedemas*, which may be congenital (Milroy's disease) or acquired, and *elephantiasis nostras*. The latter condition is secondary to chronic and recurrent bacterial, viral, and mycotic infection.

8. A much rarer etiologic agent—seen as a rule in war and in persons subject to prolonged exposure to water and cold—is the so-called *immersion* or *trench-foot*. This condition often results in loss of a part or all of an extremity, and apparently produces chronic arterial disease.

9. Finally, there are patients who present

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all the clinical signs of stasis, with no apparent reason for the stasis. These patients are usually in the older age group. Placing the leg in the dependent position will result in the usual dusky, cyanotic type of erythema and eventually in swelling, even though there is no clinical evidence of varicosities, arterial stasis, and no history of antecedent thrombophlebitis. Stasis dermatitis and stasis ulcer can develop in these patients<sup>(1a)</sup>.

Other differential diagnostic possibilities that deserve mention and need to be ruled out include *sickle cell anemia* with ulcers (Negro patients), and *drug eruptions* (particularly iododerma, bromoderma), syphilitic gumma, blastomycosis, and carcinoma<sup>(1a,b)</sup>.

### *Treatment*

The treatment of stasis dermatitis or stasis ulcer is much the same in all cases, whatever the cause. Chiefly it consists of measures to aid the sluggish circulation and to protect and soothe the damaged skin. In the initial phase of treatment, continuous bed rest and elevation of the affected part are essential. Elderly patients should have frequent periods of sitting up to avoid pulmonary difficulties; however, the legs should be kept on a level with the hips. Bathroom privileges may be allowed, but may be contraindicated in severe cases.

In the acute or weeping phase of the dermatitis, and in the presence of ulcers, continuous wet compresses and antiseptic solutions are indicated. The most convenient compress solutions to use are normal saline, Burrow's solution (1:40), or potassium permanganate solution in 1:4000 or 1:6000 dilutions.

The compresses should be warm, and should be changed at least every three hours. Fresh solutions should be used at each change. Compresses may be covered and held on by a covering of "oiled silk," other plastic materials, or waxed paper, and an overlying wrap of elastic bandage. They should not be allowed to become dry.

Convenient and less irritating antiseptic paints are 1 per cent gentian violet in a 10 per cent solution of alcohol or zephiran chloride (1:1000), either as a colorless tincture or an aqueous solution. These preparations should be applied twice daily or oftener when the compresses are changed.

Patients may occasionally exhibit a generalized id reaction, which may be either bacterial, dermatophytid, or a reaction to break-

down products of the tissue and skin. This eruption is generally most marked over the hands and arms. The local application of shake lotions such as calamine lotion or liniment, along with oral antihistamine therapy and calcium gluconate administered intravenously, are helpful procedures in controlling symptoms of id reactions. Occasionally starch baths are helpful.

Where secondary bacterial infection is a major problem, the administration of sulfonamide drugs or penicillin may be helpful. In general, the local use of these drugs is to be avoided because of their high sensitizing potential.

A constant watch should be maintained for thrombophlebitis. If this complication occurs, Dicumarol or some other anticoagulant therapy should be initiated, along with penicillin.

In patients with varicose eczema and ulcer, any therapy short of vascular surgery—preferably combining high saphenous ligation with the stripping of superficial varicosities—is temporizing<sup>(1a)</sup>. Results are much better when the operation is performed early. Results are poorer, in general, in the post-thrombophlebitic cases; in patients with long-standing, deep thrombophlebitis, surgery may even be contraindicated<sup>(2)</sup>. When ulcers do not heal under appropriate treatment, skin grafting is indicated.

Elastic bandages and stockings or gelatin boots have a definite place in the preoperative and postoperative therapy. They should not be used as a substitute for surgical intervention, except in those cases in which venous surgery is contraindicated. In general, patients should be instructed to keep their legs elevated as much of the time as possible, to avoid restricting bands of any kind about the legs, to maintain scrupulous cleanliness, and to treat any slight infection immediately.

### *Summary and Conclusions*

In the management of stasis dermatitis accurate diagnosis is essential.

Therapeutic measures include (1) bed rest, (2) simple compresses and antiseptic paints, (3) penicillin and sulfonamides if indicated, (4) antihistamines, (5) shake lotions applied locally, and (6) support or gelatin boots.

Overtreatment should be avoided.

Vascular surgery should be employed as



soon as feasible in all patients with varicose eczema or ulcer.

Patients should be given adequate instruction as to the local care of the skin.

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## CLINICAL EXPERIENCE WITH SURITAL SODIUM IN ANESTHESIA

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Since the introduction of Evipal in 1932<sup>(1)</sup> and Pentothal Sodium in 1934<sup>(2)</sup>, the production of anesthesia by these ultra short-acting barbiturates has been accepted universally. For the patient, unconsciousness is produced rapidly and without anxiety or struggling. Recovery is usually pleasant and not associated with severe nausea. For the surgeon and anesthetist, the quick and usually uneventful induction saves valuable time, while interfering little with the metabolism of the patient.

At the same time it has been recognized that the present ultra short-acting barbiturates are not ideal<sup>(3)</sup>. Their undesirable effects on the respiratory system and on the parasympathetic system, combined with their so-called cumulative action, have become well defined. The search still proceeds for an agent which "acts promptly, is potent, is rapidly detoxicated and eliminated, has a low degree of toxicity, and has few deleterious side actions."<sup>(3)</sup>

With this end in view, another thiobarbiturate called Surital Sodium\* has been developed. In chemical structure it is identical with Seconal, except that the oxygen on the basic ring has been replaced by sulphur. (Pentothal Sodium, in similar manner, is

Table 1  
Age of Patients Receiving Surital Sodium

Age (years)	No. Patients
2-20 .....	144
21-30 .....	202
31-40 .....	199
41-50 .....	224
51-60 .....	190
61-70 .....	105
71-87 .....	40
Total .....	1104

the sulphur analogue of pentobarbital.) Preliminary laboratory investigation<sup>(4)</sup> has revealed that in dogs Surital has about 1.5 times the anesthetic potency of Pentothal, but is definitely no more toxic than Pentothal<sup>(5)</sup>. The work on dogs also indicates that the cumulative effect of Surital is less than that of Pentothal. Preliminary clinical reports indicate that the agent is valuable in anesthesia and worthy of further trial<sup>(6)</sup>.

During the last six months we have had the opportunity to assess the clinical value of Surital Sodium in 1436 patients. Of these, 1104 have been reviewed in some detail. All age groups were included (table 1), the youngest child being 2 years and the oldest adult 87 years. Surital was used whenever an ultra short-acting barbiturate was indicated. Pentothal Sodium was not substituted in any case during the trial period.

Solutions were prepared in a 2 per cent concentration, employing distilled water or normal saline as the diluents. Because of the apparent increased potency of Surital over Pentothal, milligram for milligram, it was felt that a 2 per cent solution would more closely approximate the potency, cubic centimeter for cubic centimeter, of the 2.5 per cent Pentothal solution used previously. This was found to be the case. Surital dissolved easily in this 2 per cent solution and did not show any precipitation when kept over a period of four days. Preparations of d-tubocurarine chloride, in concentrations of either 3 mg. per cc. or 15 mg. per cc., dissolved readily in Surital.

### Clinical Applications

During this investigation, Surital was utilized in four variable ways. The dosage employed varied from 100 mg. to 2300 mg., always in a 2 per cent solution (table 2).

1. *Surital alone (36 patients)*: The number of cases in which the agent was used without supplement was small and was con-

\*From the Division of Anesthesia, Department of Surgery, Duke Hospital, Durham, North Carolina.

\*We are grateful to Parke, Davis and Company for supplies of this material.

Table 2  
Dosage of Surital Sodium

Dosage	No. Patients
250 mg. or less.....	259
250-400 mg. ....	278
400-600 mg. ....	204
600-800 mg. ....	163
800-1000 mg. ....	135
1000-1500 mg. ....	41
1500-2000 mg. ....	23
2300 mg. ....	1
<b>Total</b> .....	<b>1104</b>

fined to minor surgical procedures. This was done because barbiturates are considered to be primarily hypnotic agents, and exert an analgesic action only by virtue of the depth of hypnosis they produce<sup>(9)</sup>. Therefore, if the surgical procedure was prolonged or associated with potent sensory stimuli, anesthesia was supplemented with analgesic agents. In this way large doses of the barbiturate were avoided, and the danger of inadequate pulmonary exchange was diminished.

2. *In combination with local and spinal analgesia to produce hypnosis only (45 patients)*: In a number of rhinoplasties, where local and topical analgesia was employed, small intermittent injections of Surital kept the patients lightly asleep without alarming respiratory depression. Of possible significance in this group was the fact that coughing or sneezing, common when Pentothal was employed, did not occur with Surital.

3. *For induction of anesthesia, and in association with curare for intubation (476 patients)*: Usually 9 to 12 mg. of d-tubocurarine chloride were given, followed by 200 to 400 mg. of Surital. Respiration was assisted with oxygen until sufficient relaxation was obtained for intubation. Syncurine, in a dosage of 2 to 3 mg., was found to be a satisfactory substitute for d-tubocurarine chloride in producing relaxation for this purpose.

4. *As one of several agents in balanced anesthesia (556 patients)*: In this group Surital was employed not only for induction, but by intermittent injections during the procedure. A summary of the several combinations used is seen in table 3. It is felt that by a proper balancing of several agents the toxic effects of any one are minimized, with profit to the patient and satisfaction for the surgeon and anesthetist<sup>(10)</sup>. Injections of Surital, 50 to 100 mg., from time to time aided greatly in maintaining the plane of anesthesia desired, without depressing res-

Table 3  
Combinations of Agents Used  
with Surital Sodium

	No. Cases
Nitrous oxide-oxygen, curare.....	174
Nitrous oxide-oxygen, trichlorethylene, curare .....	86
Nitrous oxide-oxygen .....	77
Nitrous oxide-oxygen, ether (traces), curare .....	64
Nitrous oxide-oxygen, cyclopropane, curare.....	49
Ethylene-oxygen, cyclopropane, curare.....	41
Nitrous oxide-oxygen, ether.....	28
Ethylene-oxygen, curare .....	15
Cyclopropane-oxygen .....	12
Ethylene-oxygen .....	9
Nitrous oxide-oxygen, Avertin .....	1
<b>Total</b> .....	<b>556</b>

piratory exchange unduly, and without danger of barbiturate overdosage.

### Results

#### Induction

Intravenous administration of Surital produced a quiet state of sleep which was not in any case associated with fear, anxiety, or excitement. Patients were usually unresponsive to their name after the injection of 100 to 150 mg. No idiosyncrasy to the drug was seen. In those patients in whom a Surital-curare induction was performed for the specific purpose of intubation, from 200 to 400 mg. of Surital were adequate in nearly every instance.

On two occasions a worrisome laryngospasm was encountered during the attempt at intubation. This was resolved when the laryngoscope was withdrawn and oxygen given with positive pressure inflation. In each case intubation was uneventful after further doses of curare and Surital.

#### Respiration

After the initial induction dose of Surital, respiratory exchange almost invariably diminished, and in the occasional "susceptible" patient apnea developed for one to two minutes. As far as one could judge from clinical observation, this respiratory depression was not more severe or prevalent than that seen with Pentothal. A reduced tidal exchange was never considered as cause for alarm, as respirations could easily be assisted by manual pressure on the reservoir bag of the anesthetic machine. Intermittent doses of 60 to 100 mg. during maintenance of anesthesia rarely altered the depth or rate of the respiratory pattern.

#### Circulatory changes

In about 30 of the patients a moderately



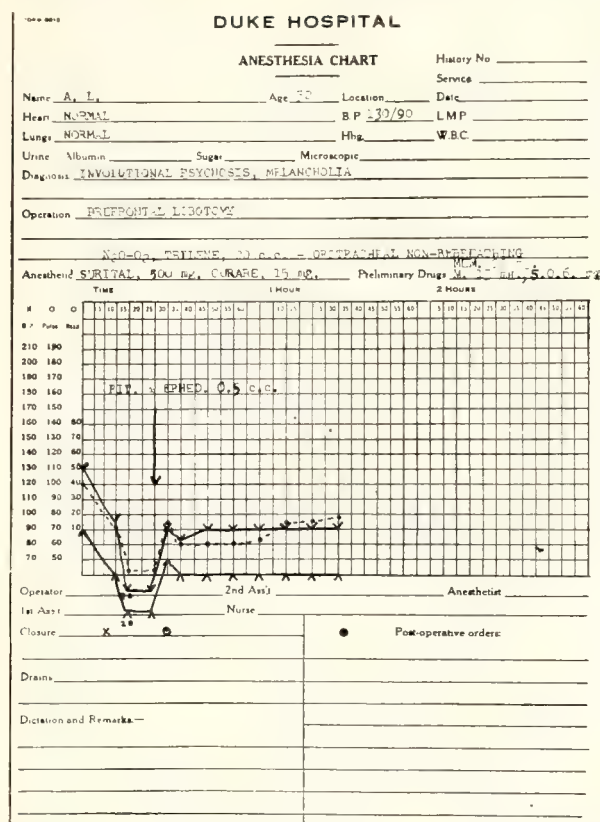


Fig. 1. Anesthesia chart (case 1). Pre-anesthetic blood pressure 130/90. After 500 mg. of Surital Sodium and 15 mg. of curare, blood pressure fell to 40/20 and pulse to 44, with some irregularities. When spontaneous improvement had not occurred after 10 minutes, 5 units of Pitressin and 3/8 grain of ephedrine was given intravenously, causing improvement in the circulatory dynamics.

severe blood pressure fall associated with bradycardia was observed during the induction period. By "moderately severe" is meant a systolic pressure which fell to 40 mm. of mercury or more below the pre-anesthetic level, and a significant bradycardia is considered a rate of 52 or less per minute. In 8 of these cases, a slow arrhythmia superimposed itself on the bradycardia. Occasionally the bradycardia was present without an associated hypotension. Figure 1 reproduces the anesthetic record of one of these patients.

These circulatory abnormalities were not confined to any particular age group, nor were they predominant in patients who had pre-existing hypertension or cardiovascular disease. In some patients "normal" status was restored without any specific therapy. In others 0.3 to 0.6 mg. of atropin, or 5 to 10 mg. of Methedrin, given intravenously, were successful in re-establishing normal circulatory dynamics. It is believed that an

accentuation of the parasympathetic vagal tone is responsible for these alterations, and that they are prone to occur in "parasympathotonic" individuals<sup>(11)</sup>. There is also some evidence to indicate that the circulatory upset may result from a direct action on the heart<sup>(12)</sup>.

### Other reflexes

Severe laryngospasm associated with the administration of Surital was not encountered, except in the two instances noted with intubation. Hiccups occurred in several cases, but were not severe or protracted enough to present a problem in the anesthetic management.

### Recovery

In this series, grimacing reflexes to painful stimuli or response to the spoken word were usually present before the patient left the operating room. In the recovery room the awakening period was not prolonged, and in only one patient was respiratory depression due to a possible cumulative effect of the drug a cause for concern. The following case history illustrates this point.

The patient, a thin phlegmatic man of 28 years, came to the operating room first on December 29, 1950, for the immediate transfer of a single pedicle abdominal flap to a granulating wound of the palm of the right hand. Preoperative physical examination was essentially normal. Blood pressure in the ward and on arrival in the operating room was 90 systolic and 50 diastolic. One hundred milligrams of Demerol and 0.6 mg. of scopolamine given fifty-five minutes before induction were adequate premedication. Over an anesthetic period of three hours 800 mg. of Surital Sodium and 12 mg. of d-tubocurarine chloride were given by intermittent injection, along with nitrous oxide-oxygen in a 70:30 proportion, administered by a partial rebreathing technique. The anesthetic course and recovery from this procedure were uneventful.

On January 19, 1951, this patient again came to the operating room, with the same premedication, for division of the abdominal flap to the palm and closure of the abdominal defect. On this occasion, over an anesthetic period of one hour, thirty minutes, he was given 1400 mg. of Surital Sodium, along with nitrous oxide-oxygen administered as before. The anesthetic course was uneventful, but almost twice as much Surital was given in half the length of time as compared to the first procedure. The reasons for this increase may be that a less experienced anesthetist was conducting the case, that more barbiturate was required in the absence of curare, or that sensory stimuli were more potent and more frequent. In any event, on return to the recovery room, the respirations were deep but very slow, varying between 4 and 6 per minute. Administration of oxygen by the nasopharynx was begun, and the patient was watched carefully. Within the next three hours, three intravenous injections of Coramine, 5 cc., were given. These produced coughing and transient improvement in the respiratory rate. After the third injection respirations were regular and deep at 8 to 10 per minute, and the patient would voluntarily increase his rate of res-

piration when it was demanded of him. However, it was not until midnight, fourteen hours after operation, that a rate of between 14 and 16 per minute was maintained. During this entire postoperative period the patient's color remained good, the pulse ranged between 60 and 80 per minute, and the blood pressure maintained itself at 90 to 110 systolic and 56 to 80 diastolic.

On January 24, 1951, this patient came to the operating room a third time for set-in of abdominal flap to the right hand. Premedication consisted of 100 mg. of Demerol and 0.1 Gm. of Seconal. On this occasion, a brachial block was done, employing 25 cc. of a 2 per cent solution of Xylocaine. The anesthetic course was uneventful, and no respiratory depression was noted during or after the operation.

It is felt that in the second operation a relative overdose of Surital was given, with a demonstration in the postoperative period, when painful stimuli were absent, of the cumulative effects of this barbiturate on the respiratory center. The first and third procedures served as controls to show that cumulative effects do not occur when dosage of the agent is watched carefully, and that there is no depressant effect from premedication alone.

Excitement and irrationality were displayed only once during the waking phase. Tremors or "shaking" of the extremities in response to stimulation were no more common than after the administration of Pentothal, and less common than following the use of Evipal. Two deaths occurred in the series. In neither case could Surital be implicated in any way with the fatality.

#### *Comparison with Pentothal Sodium*

A discussion of any new ultra short-acting barbiturate involves a comparison with Pentothal. What undisputed advantages does it possess, if any, and are its limitations of more significance than those of Pentothal? To answer these questions on the basis of clinical impressions alone would be misleading. One cannot be exact and certain about variations which may occur in the clinical applications of drugs which have many properties in common.

Certain it is that Surital Sodium and Pentothal Sodium have many pharmacologic actions which are similar in nature, if not perhaps in degree. In the manner employed in this series we have found no outstanding differences between the two drugs. There may be less respiratory depression and a lower incidence of laryngospasm with Surital<sup>(6)</sup>, but our clinical impressions alone cannot confirm it. It has been felt also that the circulatory disturbances seen with Surital are no more frequent or severe than those seen, from time to time, with Pentothal<sup>(12)</sup>. In fact, since we have become "circulation conscious" with regard to barbiturates, the phenomena observed with Surital have been

duplicated several times with Pentothal. Anesthetists at this hospital agree that it is virtually impossible to distinguish clinically between the administration of a 2.5 per cent solution of Pentothal and a 2 per cent solution of Surital.

#### *Summary*

1. Clinical impressions gathered from the use of Surital Sodium in 1436 patients are presented.
2. No outstanding differences could be seen between Pentothal Sodium and Surital Sodium when given intravenously to produce or help maintain anesthesia.

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#### **Search for Better Anesthetic Drug Ends In Parke-Davis' Development of Surital Sodium**

A search of several years for a better all-around anesthetic drug has ended successfully in the development of Surital Sodium at Parke, Davis and Company.

Dr. E. A. Sharp, director of clinical investigation, explained recently, "Surital is a highly potent compound which has proved to be in some respects superior to any intravenous short-acting anesthetic agent now available."

Surital, a new thiobarbiturate, already has been found to be safe and effective on thousands of patients, he added.

Among its many advantages, he said, are high potency; smooth and rapid induction of sleep, free of undue excitement or irritability; early and easy recovery, with infrequent side reactions; minimum respiratory depression; applicability over a wide age range; and usefulness among infants and children because of its effectiveness rectally.

"Surital is currently available only to certain hospitals," he emphasized. "It will be several months before production allows general distribution."



CLINICAL IMPRESSIONS GLEANED  
FROM THE USE OF A NEW  
INTRAVENOUS ANESTHETIC,  
SURITAL SODIUM

ROSCOE L. WALL, M.D.

WINSTON-SALEM

The search for new anesthetic agents constantly continues. Of the many barbituric acid derivatives, only four—Amytal, Nembutal, Evipal and Sodium Pentothal—have received extensive clinical trial as intravenous anesthetic agents. None of them has adequately met the rigid requirements of the ideal anesthetic. To a greater or lesser degree they all cause respiratory and circulatory depression, laryngospasm, bronchospasm, and coughing. The very slow metabolic degradation and elimination of these drugs when given over a long period of time or in large quantities often produce an extended postoperative sleep. None of them alone provides adequate muscular relaxation for major surgery. Any new agent which might eliminate any or all of these drawbacks deserves investigation and clinical trial.

The Department of Anesthesiology of the Bowman Gray School of Medicine and the North Carolina Baptist Hospital has had the opportunity to investigate clinically the behavior of a new intravenous anesthetic agent—Surital Sodium\*. It could be called the thio-analogue of Seconal just as Pentothal could be called the thio-analogue of Nembutal. A solution of Surital is yellower in appearance and has a stronger sulphurous odor than does an equal concentration of Pentothal. Investigators<sup>(1)</sup> have shown by experiments on animals that Surital has a potency of 1.5 as compared to 1.0 for Pentothal. They have also reported a more rapid induction and recovery period than with Pentothal. Finally, they found that Surital has a lower rate of accumulation, as based on the duration of anesthesia following repeated doses, and on the fact that it has practically the same toxicity as Pentothal.

Preliminary clinical reports<sup>(2)</sup> indicate that Surital Sodium is a valuable anesthetic agent and worthy of further clinical investigation.

*Material and Method*

Since September, 1950, the Department of Anesthesia at the North Carolina Baptist Hospital has administered Surital Sodium to 747 patients. We have had the opportunity to observe its action in detail, and thus to assess its clinical value. Surital Sodium was used in all age groups, from the very young to the aged. Patients were about equally divided between the sexes. It was used in both poor and good surgical-risk patients, and with all types of surgical procedures. It has been administered as the sole anesthetic agent and as the primary anesthetic agent along with nitrous oxide, ethylene, cyclopropane and combinations of the above. It has been given as an induction agent for gas-oxygen-ether anesthesia, with d-tubocurarine and Syncurine for inductions and intubations, and for complementing and supplementing spinal and regional anesthesia.

Operations varied in length from five minutes to two hours and thirty minutes. Surital Sodium plus oxygen was administered as the only anesthetic agent in 633 operations, which ranged in duration from five minutes to two hours and ten minutes, the average duration being 24.6 minutes.

The average amount of Surital administered per patient was .45 Gm. It was administered both by the intermittent method, using a 2.5 per cent solution, and by the drip method, using a 0.5 per cent solution.

Surital Sodium was given with other single anesthetic agents, or combinations of agents in 53 cases, and for induction and intubation in 61 cases.

All patients received atropine or hyoscine with morphine or Demerol forty-five minutes to one hour pre-operatively, as is the routine practice with other anesthetic agents.

*Induction and Maintenance Dosage*

For induction and intubation, Surital Sodium was used 41 times. The average amount administered was 0.2 Gm., with an average dose of 2.5 mg. of Syncurine. This combination has proved to be ideal, and recently we have administered it routinely for most intubations. This combination depresses respiration less and is of a shorter duration than any other barbiturate used with either d-tubocurarine or Syncurine.

The inductions were smooth, quiet, and as rapid as with Sodium Pentothal. One case of excitement, caused by the application of

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\*Surital Sodium used in this study was supplied through the courtesy of Parke, Davis and Company, Detroit, Michigan.

the face mask before the patient was entirely unconscious, occurred. The administration of oxygen is begun just as soon as the patient becomes unconscious, regardless of the length of the operation to be performed. By this method, anoxemia is prevented, thereby avoiding some of the complications that might have been encountered. The induction is always pleasant for the patient, as is usually the case with all intravenous agents.

Maintenance dosages of 25 to 50 mg. were given as indicated by the increased depth of respiration, phonation, return of eye-lid reflexes, or slight movement of the extremities. It is not difficult to keep patients in this light stage of surgical anesthesia when using Surital Sodium for minor operations. It was observed by the anesthesia staff that patients could be kept in a much lighter stage of anesthesia with Surital Sodium than with Pentothal Sodium. As a result, they do not respond to painful stimuli and, therefore, do not move. Although the barbiturates are not supposed to have any analgesic properties, we have concluded that Surital Sodium undoubtedly does.

In long operations when the amount of Surital Sodium should be reduced, we have supplemented it with other anesthetic agents—namely, nitrous oxide, ethylene, and cyclopropane, used singly or in combination. Nitrous oxide oxygen was used most frequently. Even as lean a mixture as 50 per cent nitrous oxide with 50 per cent oxygen appreciably cut down the amount of Surital Sodium needed. To obtain surgical relaxation with the latter, we used d-tubocurarine or Sincurine.

#### *Results*

##### *Reaction time*

In general, the reaction and recovery time following the administration of Surital Sodium is much shorter than that of Pentothal. The patient was considered to have recovered when he reacted to stimuli or responded when his name was called. Patients varied in this respect, from awakening on the operating table, to awakening before reaching their room. In very few cases it took the patient more than an hour to recover. The average time of recovery in the 422 cases where Surital Sodium and oxygen alone were used was 7.7 minutes after the operation.

##### *Other effects*

*Cardiac arrhythmias* were encountered in only two patients in this series. In both cases,

the arrhythmia was of short duration and was corrected when an abundant supply of oxygen was administered. It was the opinion that these two were caused by a lack of oxygen.

*Hypotension:* No severe fall in blood pressure occurred during this series. The average fall in systolic pressure was between 10 to 20 mm. of mercury. No severe bradycardia or tachycardia has been observed up to this time.

*Respiratory alterations:* After the initial induction dose of Surital Sodium, the depth of respirations almost invariably diminished, but the rate per minute remained the same. While respiratory exchange did diminish appreciably, depending upon the depth of the anesthesia, the diminution was not felt to be as great as with Pentothal Sodium. The respiratory depression caused by Surital Sodium showed predominantly a decrease in volume exchange rather than in rate.

Apnea was encountered in only a few cases. This was due to the slow, cautious technique used in administration, and discontinuing temporarily the agent short of causing respiratory arrest. When apnea did occur, it was corrected both by discontinuing the drug and by applying intermittent positive pressure oxygen from the rebreathing bag of the gas machine.

*Laryngospasm:* No severe case of laryngospasm resulted. When this complication did occur, it was more benign and less frequent than that associated with the other intravenous barbiturates.

*Phlebitis or vein irritation:* This complication was not met with, owing to the fact that a solution no stronger than 2.5 per cent was used.

*Postanesthetic complications:* There were no deaths or postanesthetic complications attributable to this agent or to the anesthetic procedures used.

#### *Conclusions*

This clinical trial in 747 cases indicates that Surital Sodium does not fulfill all the requirements of an ideal anesthetic. In certain respects, however, it is superior to the other barbiturates. The following advantages have been observed.

1. Recovery was more rapid than with other agents.
2. There was less circulatory depression.
3. Respiratory depression was less marked.



4. Laryngospasm occurred less frequently and was not as severe or prolonged as with other anesthetics.
5. Excessive hypotension was not encountered, the blood pressure falling no more than 20 mm. of mercury, systolic.
6. Cardiac arrhythmia occurred in only two cases, both of which were of short duration and were corrected when anoxemia was eliminated.
7. There were no deaths or postanesthetic complications.

The advantages and disadvantages of Sodium Surital as observed in this series lead to the conclusion that this intravenous agent is entitled to further clinical trial.

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## EXPERIENCE WITH THE MALE NORTH AMERICAN FROG TEST

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The need for a simple, reliable, and rapid pregnancy test, available in any hospital laboratory, is obvious. The purpose of this paper is to offer for analysis our experience with the Male North American frog test, in a small community hospital, and to invite the experience of others.

The work presented is not original, but is simply the application of the procedure described by Robbins and his associates<sup>(1)</sup>. Various slight modifications as described by other investigators have been utilized, notably Cutler's concentration of urine inoculum and method of keeping the test Amphibia<sup>(2)</sup>.

The test may be relied upon as soon as ten to fifteen days after the first missed period. It may be done even earlier, but if the results are negative, it should be repeated after the prescribed interval has elapsed.

### Technique

The following materials and equipment are needed:

- Live male frogs (*Rana pipiens* or *Rana clamitans*)
- Covered glass food dish (5 by 8 inch size accommodates a dozen frogs)
- Refrigerator—kept at 4 to 6 C. for storing frogs
- Syringe and needles
- 5 ml. pipette
- Centrifuge
- Microscope
- 100 ml. graduated cylinder
- Urinometer
- Bromocresol green (Indicator solution: 0.04 per cent)
- Hydrochloride acid (20 per cent solution)
- Phenolphthalein (0.5 solution)
- Sodium hydroxide (0.1 normal solution)
- Kaolin, acid washed powder

Two and one-half ml. from a 3 to 4 ounce sample of first morning-voided urine are injected into the dorsal lymph sac of the frog, which is then placed in a covered, dry glass container (600 ml. beaker). After thirty minutes the frog is removed and its cloaca is brought into contact with a glass slide, the frog being compressed to make it void. The slide is then examined under the microscope for the characteristic sperm cells. If these are present, the test is reported positive and no further procedure is necessary. If no sperm cells are present, the Scott concentration procedure described in Cutler's paper<sup>(2)</sup> is begun.

If the first frog continues to give a negative reaction after the concentration is complete, 1 ml. of the concentrated inoculum is injected into the dorsal lymph sac of a second frog, and its urine is examined at thirty minute intervals. If at the end of three hours from the time of the injection no sperm have been produced from either frog, the test is reported negative. Occasionally, the 2.5 ml. of whole urine kills the frog, but this does not happen with the concentrated inoculum.

Interpretation of the test offers no difficulty. The sperm, when present, are plentiful and easily recognizable, resembling nothing else seen in urine.

**Precautions:** We do not use frogs a second time; we do not depend on frogs which have been in our storage longer than three weeks. We frequently check frogs giving a negative reaction by injecting the dorsal lymph sac

with 1 ml. of known positive inoculum, which can be kept frozen in the refrigerator indefinitely. There is always an ample supply left over from previous positive tests.

The use of two frogs in each test virtually eliminates the possibility of a false result from using a female frog by mistake. Although sex-distinguishing features of *Rana pipiens* are very slight, so far as we know, we have received only one female frog from our supplier.

### Results

Up to the present a total of 221 tests have been performed. Of these, 31 were done with specimens of urine from women known to be pregnant. Five of the patients had advanced beyond the seventh month of pregnancy. (Some workers have reported a high incidence of false negative results after the second trimester.) Specimens from women known to be nonpregnant were used in six of the tests, all correctly negative.

The remaining 184 tests were done as a laboratory aid in diagnosis. Follow-up was sufficient in 187 of the patients to confirm or deny the results.

Total results are as follows:

Correct tests (confirmed).....	184
False negative tests.....	2*
False positive tests.....	1†
Percent. of accuracy.....	97.86
Percent. of accuracy by Robbins <i>et al</i> <sup>(1)</sup> .....	96.0
Percent. of accuracy by Carlos Galli Mainini <sup>(2)</sup> (S. American frogs) .....	99.7

### Comment

If this test can be shown to be as reliable as other animal tests (which some say has already been done), it offers rather great advantages. The first is that it can be performed with the facilities of any hospital laboratory and of many office laboratories. The equipment and reagents are few and simple. Second is the speed of the test. The maximum time required to obtain a negative report is three and one-half to four hours,

\* One of the false negative results was proved to be due to a missed abortion. Since no hormone was present, the reaction was normal. In the other case, a second test given after the patient had missed her second period was positive.

† I cannot explain the false positive result, which was reported to me by the patient about a year later. A test done at this time was negative. The patient denied the possibility of a miscarriage. On pelvic examination a moderately tender mass, taken to be tubo-ovarian, could be felt in the cul-de-sac. She was advised to have an operation, but has not returned here. Whether this woman had a tubal abortion which she took care of herself is cause for conjecture.

while a positive report is often available within fifteen to thirty minutes. This factor may be of considerable importance in solving diagnostic problems, such as a differential diagnosis in ectopic pregnancy. The third advantage is the extremely low cost, both actual and relative. Fourth is the conclusiveness of the reaction. No long search to determine the presence of spermatozoa is required.

We have found the procedure particularly useful in:

1. Patients who have passed hydatidiform mole.

We have had 4 of these to date. All have remained free of hormone.

2. Patients who have some contraindication to pregnancy.

Examples: One patient with arrested tuberculosis had undergone thoracoplasty and Pomroy sterilization. Her physician requested the test after she had missed two periods. The result was negative. In a second patient, cancer of the breast developed during lactation. She underwent radical mastectomy. Two weeks later she missed her second period. The frog test confirmed pregnancy.

### Summary

Experience with the male frog pregnancy test has been presented. In my judgment, it is a reliable, rapid, simple, economical and valuable aid. It can be performed with the laboratory facilities of any hospital.

The author's grateful appreciation is extended to Mrs. Irene Blue for her untiring technical assistance.

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**Causes of Fear Among Obstetric Patients**—Over the years I have seen no instance in which an unsuccessfully attempted abortion has been followed by the birth of a physically abnormal or deformed child. Many of the resultant children are now adults, and in them I have noted no mental abnormalities which might not much more appropriately be attributed to their inherited familial genes and chromosomes. Certainly there has been no congenital absence of gray matter due to the unsuccessful outcome of an attempt to produce an abortion. A kind heart, an understanding experience and something approaching at least a speaking acquaintanceship with the Almighty will be needed to guide one in answering these unexpressed but momentous questions of spiritual guilt.—Bloss, J. R.: *Causes of Fear in Obstetric Patients*, *J.A.M.A.* 144: 1359 (Dec.) 1950.



## North Carolina Medical Journal

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"The prime object of the medical profession is to render  
service to humanity; reward or financial gain is a subordinate  
consideration. Whoever chooses this profession assumes the  
obligation to conduct himself in accord with its ideals."—Prin-  
ciples of Medical Ethics of the American Medical Association,  
Chapter 1, Section 1.

OCTOBER, 1951

### THE INCREASING IMPORTANCE OF THE ANESTHETIST

The two papers in this issue from the De-  
partments of Anesthesia of Duke and of  
Bowman Gray, and the three papers on an-  
esthesia in the June issue, are concrete evi-  
dence of the increasing importance of the  
professional anesthetist. Part of Dr. Alfred  
T. Hamilton's paper was purposely omitted  
when it was published in the June issue, so  
that it might be used as the basis of this  
editorial. With his permission, it is now re-  
produced in part, as a guest editorial.

\* \* \*

Few surgeons would abandon the pre- and  
postoperative management of their patients.  
At the same time, few surgeons would deny  
the value of consultation, not only in refer-  
ence to the desirable anesthetic agent but

concerning preoperative medication and pre-  
paration. The immediate postoperative per-  
iod is often not attended by the operating  
surgeon because his presence is required  
elsewhere, and certainly the short period of  
recovery carries, in general, the highest in-  
cidence of preventable anesthetic mortality.  
It certainly helps a surgeon on his *next* case  
to know that the *preceding* patient is regain-  
ing consciousness with an adequate airway  
and with the provision of necessary drug  
and fluid support. Later on, the attendance  
of the anesthetist upon the patient often  
eases the surgeon's burden, and no doubt  
adds to the patient's safety, in such condi-  
tions as postoperative atelectasis and pneu-  
monia.

Two fields of general surgery revolution-  
ized by specialized anesthesia concern the  
neck and the abdomen. In the former, pre-  
requisites to good modern surgery are a  
constantly satisfactory airway with high  
oxygen tension. There can be no comparison  
between the satisfaction of operating when  
a dexterously inserted intratracheal tube is  
employed, on the one hand, and under local  
or ordinary inhalation anesthesia, on the  
other. Pre- and post-operative visualization  
of vocal cord function is an incidental but  
important benefit to tracheal intubation. In  
extensive procedures involving the neck,  
chest, and abdomen, so frequently seen dur-  
ing the late war, endotracheal anesthesia  
with positive pulmonary pressure and com-  
plete abdominal relaxation is necessary to  
a successful outcome.

Those surgeons who have a special pre-  
ference for spinal anesthesia are particu-  
larly helped by the professional anesthetist.  
Sise's hyperbaric pontocaine, Lemmon's con-  
tinuous spinal, and saddle anesthetics can  
best be controlled by one not concerned with  
the operation itself.

Few professional men are in such wide-  
spread demand by their confreres. The an-  
esthetist may be useful to the internist, the  
surgeon, and the obstetrician.

The anesthetist, as a medical specialist  
with advanced professional training and cer-  
tification, desires the privileges of his pro-  
fession, including freedom of action and  
freedom from economic competition with the  
hospital. He wants his individual patient

billed for the anesthetic only once and that once by the anesthetist. He wants the patient's physician who calls him to explain such a charge to the patient. He wants the insurance companies to take benefits for medical services of all sorts, out of Blue Cross hospitalization contracts and put them in Blue Shield where they rightfully belong. —A.T.H.

\* \* \*

### THE TIME ELEMENT IN MEDICINE

Much has been said and written about the importance of "timing" in military and political affairs. The time element is just as important in medicine, both in diagnosis and treatment. One of the worst habits a doctor can form is that of making "snap" diagnoses of his patient, without waiting until he has obtained all the evidence possible. In a full blown case of measles or chicken pox or herpes zoster, it is quite easy and even desirable to "pronounce" the disease, as the layman used to say; but in a patient with obscure abdominal symptoms or a persistent fever, several days of careful questioning and physical examination, supplemented by technical aids, are usually necessary for an accurate diagnosis and proper treatment.

An excellent example of the importance of the time element in diagnosis is the average myocardial infarction. Only too many textbooks describe this condition as characterized by substernal pain, a precipitate fall in blood pressure, fever, leukocytosis, an increased sedimentation rate, a pericardial friction rub, and electrocardiographic changes.

The impression may be left on the mind of the student—and may persist for some years in practice—that the blood pressure falls, the temperature rises, the number of white blood cells and the sedimentation rate both increase, and electrocardiographic changes develop almost immediately after the onset of the pain. It is generally recognized that the friction rub is much less constant, and is much oftener absent than present.

To have this picture in mind as typical of a myocardial infarction is to miss many diagnoses. Except in massive infarctions the

blood pressure is more often elevated for the first few hours—perhaps for twenty-four to thirty-six—before it begins to fall. The temperature seldom rises until at least twelve, and oftener twenty-four to thirty-six, hours have elapsed. Leukocytosis comes on early, within a few hours, but the sedimentation rate seldom rises for at least twenty-four and often forty-eight hours. It persists for days or even weeks, while the leukocyte count returns to normal in the uncomplicated case within two or three days. The friction rub is to be heard in only one of every four or five cases, and may disappear within a few hours. Finally, the electrocardiographic changes may not appear for a day or two—sometimes four or five.

The clinician who looks upon a coronary occlusion as a sort of evolutionary process, which takes from one to three days to unfold, and who does not allow anxious and excitable relatives to prod him into an immediate answer to the question, "What's the matter, doctor?" will not be embarrassed nearly so often as if he attempts to label every pain in the chest and upper portion of the abdomen within ten minutes after he walks into the sick room.

The time element is of inestimable importance when one is dealing with psychosomatic or psychoneurotic complaints. There is absolutely no substitute for time in taking the history of a patient whose symptoms are wholly or partly functional. Such patients can not be made to tell the most relevant part of their story to a doctor who is obviously impatient and anxious to get to the next case. In the long run, furthermore, time will be saved by giving such a patient ample time at the first interview to get a complete history, which need not be repeated on later visits. Much more can be learned from a single interview of an hour than from a dozen fifteen-minute sessions; and giving the patient an opportunity to unburden himself—or herself—is an important part of the therapy.

There are numerous other ways in which the element of time enters into the diagnosis, prognosis, and treatment of disease; but the time customarily allotted for reading an editorial suggests that these be reserved for a possible future paper on the subject.

\* \* \*



## WARTIME WASTAGE OF MEDICAL MANPOWER

It is accepted as axiomatic that war is wasteful; but much of its waste might be prevented by intelligent planning. One of the most appalling wastes in World War II was medical manpower. Thought is being given now to a more economical use of medical men in the present planning for mobilization.

That Great Britain has been also extravagant with its medical manpower is apparent in the Supplement to the *British Medical Journal* for August 18, which is quoted in part:

"The Central Medical War Committee is once again compiling a register of the profession. The recollection of most of us is that we put our names on this register, which was combed and combed again to supply doctors for the three armed Services. The three Directors-General competed with each other for the greatest number of doctors, and an appalling wastage of medical men resulted. The medical press was full of bitter complaint from those who had put their names and capabilities on the register and had been handed over to the insatiable armed Forces to live in enforced idleness thereafter."

The writer — Dr. Kenneth S. Mullard — proposes that the three medical branches of the armed forces be merged into one, and that arrangements be made for free transfer from military to civilian life, and vice versa, as the needs of war require.

It is interesting that Britain has had—and still has—the same problems, the same complaints, and the same solutions proposed that the United States has had—and still has.

\* \* \*

## WATER CASTING UP TO DATE

Once upon a time, many years ago, certain physicians gained considerable fame as a result of their supposed ability to diagnose and treat disease by examining the urine. They were known as "water casters."

According to Webster, this term is now obsolete; but it should be revived to apply to an outfit practicing in Chicago under the name of the National Bureau of Analysis. According to a letter sent to a prominent business man: "Periodical examinations of the urine will enable you to detect trouble in the body far in advance of the time when aches, pains or indigestion send you to your physician only to find out the disease is well established . . . you cannot buy health once

it is lost but you may preserve it for many useful years by watching the danger signals which appear in the urine."

A circular accompanying the letter states that "periodical urinalysis is your protection against diseases that give no warning." In order to safeguard the health of our big business and professional men, the National Bureau of Analysis offers its "Quarterly Stay-Well Service" for the ridiculously low price of \$15. Every three months the Bureau will send the subscriber a stamped and addressed container. An analysis of the urine, "both chemical and microscopic," is made, and "the findings are passed on to our Laboratory Director who compares them with all previous reports of your case, checks symptoms and gives you his unbiased opinion in a personally dictated letter," mailed "in an envelope marked 'Personal.'"

In a sample report to the hypothetical John Doe, it is noted that the reaction is "sharply acid" and that there is a trace of sugar, although the acetone is reported as "normal." Mr. Doe is told that the report is less favorable than the preceding one, and the Laboratory Director warns him that he is eating too much and has overindulged in sweets or starches. Mr. Doe is advised to "eat less of the heavier foods, such as meats, eggs, potatoes . . . substituting fresh vegetables and fruits . . . If you follow these instructions an improvement should be noted in your next report."

One wonders just what is meant by "sharply acid." The quality of sharpness suggest that the urine was tasted. If so, the price of \$3.75 per urinalysis may be justified.

One wonders, too, just where the Laboratory Director learned that meats and eggs should be reduced in an anti-diabetic diet, and that "fresh vegetables and fruits" may be eaten without taking thought of their carbohydrate content.

Listed among the long-time members of the National Bureau of Analysis are S. L. Avery, chairman of the Board, Montgomery Ward and Company; Clarence M. Brown, ditto of the Pittsburgh Plate Glass Company; M. S. Eccles, of the Federal Reserve Bank; United States Senator Robert S. Kerr —and others who should know better, but who are living proof of the truth of Barnum's observation that the people like to be humbugged.

## CORRESPONDENCE

To the Editor:

The purpose of this letter is to acquaint you with the present procedures whereby eligible civilian physicians may request an appointment in the Regular Navy, and to solicit your cooperation in an effort to secure wide publicity of this matter in the State of North Carolina.

Civilian physicians with no present service affiliation and who did *not* participate in the Army Specialized Training Program (ASTP) desiring commissions in the Regular Navy should apply to the Office of Naval Officer Procurement, 1400 Pennsylvania Avenue, Washington, D. C.

It is no longer necessary for the young physician completing his internship to be ordered to appear for written professional examination and to await action thereon before appointment may be effected. Those serving in internship may submit their applications within two months of completion date, but appointments will not be issued until they have satisfactorily completed internship.

Your interest and cooperation in this matter are appreciated.

Sincerely,

J. B. LOGUE

Rear Admiral (MC) USN  
District Medical Officer

\* \* \*

To the Editor:

The medical staff of the Central Carolina Convalescent Hospital, in Greensboro, is anxious to acquaint the physicians of North Carolina with some pertinent information concerning our hospital and its functions.

Our hospital is unique, in that it was established on an emergency basis, due to the fact that in 1948 the doctors of Greensboro and the surrounding areas found an epidemic of polio right on our front doorsteps. Facilities for treating polio patients were inadequate, and the need was great. Through the combined efforts of public appeals for labor and financial aid, along with the advice and trained personnel from the National Foundation for Infantile Paralysis, the doctors of Greensboro shouldered the task of treating patients from a large epidemic area in a hospital built specifically

for the medical care of acute and convalescent cases of poliomyelitis, with a staff of specialized nurses, physiotherapists and aides. There are no house or resident doctors. The practicing doctors of Greensboro compose the medical staff.

When the epidemic ended we had a rather small group of local patients receiving convalescent care. Because we had the facilities and trained personnel with us, we agreed to treat patients from other areas, as long as our beds held out, and as long as first-rate physical therapy for convalescent patients could be given. We have, therefore, continued to receive patients from all over North Carolina, neighboring Southern States and on some occasions, from distant regions.

At times, however, through misunderstanding of the nature of the facilities available at the Central Carolina Convalescent Hospital, serious problems in regard to transportation and admission of patients have developed. We are not equipped as a diagnostic center, although frequently we have had to assume that function. Seriously ill patients have been sent long distances to the hospital, because of an erroneous diagnosis of poliomyelitis, or because of suspected poliomyelitis which had not been confirmed by either consultation with a specialist or by laboratory studies. These patients have had to suffer the return trip home, because we are equipped to treat only polio patients.

We feel that when patients are to be transported to the Central Carolina Convalescent Hospital it is to the patient's advantage for the referring physician to speak personally with either the nursing supervisor on duty at the hospital, or to the physician who will treat the case on arrival. Seriously ill polio patients should not be started on a long journey without adequate facilities for emergency care en route. It must be remembered that the tiring effort of a long journey can change the condition of a patient from "good" or "fair" on departure to "critical" on arrival. If facilities for treating respiratory and bulbar and encephalitic patients are not available where the diagnosis has been made, then those facilities should be found as nearby as possible. Asheville, Charlotte, Durham, Raleigh, Winston-Salem, and Wilmington should be able to serve the state as emergency care centers as well as diagnostic centers. Specialists for consultation and laboratory facilities are available in these cities, and this should make unneces-



sary the transportation of critically ill patients over long distances to the hospital in Greensboro.

We are extremely thankful that our state has been spared an epidemic of any major proportions during the past two years, and we are glad that we are able to maintain the Central Carolina Convalescent Hospital as a service to those who seek treatment for either acute or convalescent poliomyelitis. We are proud to offer our facilities and the services of our specially trained personnel just as long as we have beds and as long as we have poliomyelitis with us.

Sincerely yours,

EDWARD P. BENBOW, JR., M.D.

for the Medical Staff of the

Central Carolina Convalescent Hospital

#### **Acthar Price Drop and Long-Acting Form Cuts Cost of Treatment**

Two developments which will greatly lower the cost of treatment with ACTH and bring added convenience to the user were announced recently by F. W. Specht, president of Armour and Company.

First, Mr. Specht said, the price of Acthar, The Armour Laboratories brand of ACTH, is being reduced an average of 25 per cent. The new price means a saving of five to eight dollars per day to the patient in the treatment of certain diseases.

Second, he said, The Laboratories have developed a long-acting form of the drug, known as Acthar Gel. Acthar Gel after initial treatment need be injected only once every one to three days, in contrast to as many as four injections a day of Acthar powder in solution, as used hitherto, with the consequent saving of time, money and discomfort.

Since Acthar was first used successfully in treating human diseases, it has been found that relatively small quantities will work in many cases. Some arthritis patients are able eventually to get along with a maintenance dose once every few days.

The new Acthar Gel will sell at the same price per unit as Acthar powder. It will not replace Acthar powder because the latter has advantages in certain diseases where rapid action is needed.

#### **Dr. Thompson Appointed Associate Medical Director**

Dr. Eugene J. Thompson has been appointed associate medical director of Winthrop-Stearns, Inc., it was announced by Dr. Justus B. Rice, medical research director.

Dr. Thompson will work in the department of medical research, which is concerned with clinical investigation of new pharmaceuticals. He will also assist in the training of the company's professional service representatives.

Prior to joining Winthrop-Stearns, Dr. Thompson interned at Boston City Hospital. He received his M.D. from Boston University School of Medicine. He took his B.S. degree at the College of the City of New York.

During World War II he served for several years in the air force as an aerial navigator and instructor in charge of radio navigation.

## **BULLETIN BOARD**

### **NEWS NOTES OF THE BOWMAN GRAY SCHOOL OF MEDICINE OF WAKE FOREST COLLEGE**

During the month of September, 1951, the Bowman Gray School of Medicine of Wake Forest College celebrated its tenth anniversary.

The Bowman Gray School of Medicine is an expansion of the Wake Forest College two year medical school located at Wake Forest College, Wake Forest, North Carolina, from 1902 until 1941. The name was changed on the opening in Winston-Salem from the Wake Forest College School of Medical Sciences to the Bowman Gray School of Medicine of Wake Forest College, in recognition of the benefactor who made the expansion possible, the late Bowman Gray of Winston-Salem.

The original move of the medical school to Winston-Salem was made possible through the will of the late Bowman Gray. On August 4, 1939, the resources of the Bowman Gray Foundation were made available to the Wake Forest College School of Medical Sciences, with the provision that the institution be relocated in Winston-Salem. Since the removal of the school in 1941, the members of the Gray family have continued in their interest and support of the institution. Included in their gifts is Graylyn, the Bowman Gray estate of one hundred acres, which is now being used by the Department of Neuropsychiatry for a hospital and clinics.

The trustees of the Smith Reynolds Foundation have made available resources to Wake Forest College, making it possible to relocate the college in Winston-Salem, thus establishing a complete university in Winston-Salem. Ground-breaking exercises for the college were held on October 15.

The Bowman Gray School of Medicine of Wake Forest College and its teaching hospital, the North Carolina Baptist Hospital, are institutions of the Baptist State Convention of North Carolina. The hospital was opened in 1923, with eighty-four beds, and was expanded in 1941 to a 300 bed hospital. Contracts have been let for an added 150 bed wing, scheduled in late 1952.

When the medical school opened in Winston-Salem on September 10, 1941, it had a student body of seventy-three. This year the student body will number 188. Fifty-six freshmen, who were selected from 860 applicants, were admitted on October 1, 1951. During the ten year period of 1941 to 1951, approximately seven thousand applications for admission have been considered. In the nine graduating classes, 383 candidates have received the degree of Doctor of Medicine.

During the course of the tenth year celebration in September, Dr. Coy C. Carpenter, Dean of the Bowman Gray School of Medicine of Wake Forest College, was honored by the faculty of the institution. Dr. Carpenter was appointed dean of the two year medical school at Wake Forest College in 1936, and continued in that capacity with the removal of the school. The year 1951, therefore, marks his fifteenth year as dean of the institution. In recognition of Dr. Carpenter's service, the faculty has had painted a portrait of Dr. Carpenter, which will hang in the lobby of the institution. In further recognition, the faculty has established the Coy C. Carpenter Emergency Student Loan Fund, for the benefit of students enrolled in the institution.

Other phases of the program carried out during the month of September commemorating the tenth anniversary of the medical school included the ground-breaking exercises for the new wing of the North Carolina Baptist Hospital, the teaching hospital of the medical school. A public banquet was

held on September 27, 1951, at which time Mr. John M. Russell, Executive Director of the John and Mary R. Markle Foundation, was the principal speaker, in further recognition of the contributions of the institution to community health and welfare, and to medical education.

### NEWS NOTES FROM THE UNIVERSITY OF NORTH CAROLINA SCHOOL OF MEDICINE

Postgraduate medical courses sponsored by the University School of Medicine and the Extension Division are being held at Morganton, with the Burke County Medical Society as co-sponsor, and at Goldsboro, with the Wayne County Medical Society as co-sponsor. The programs are as follows:

#### Morganton

##### OCTOBER 3

- 4:00 p.m.—Functional Uterine Bleeding  
7:30 p.m.—Hysterectomy: Indications and Contra-indications—Dr. H. Hudnall Ware, Jr., Medical College of Virginia

##### OCTOBER 10

- 4:00 p.m.—Management of Some Disorders of Cardiac Rhythm  
7:30 p.m.—Treatment of the Failing Heart—Dr. Harry Gold, Cornell University Medical School

##### OCTOBER 17

- 4:00 p.m.—Means of Diagnosis and Management of Certain Major Microbial Diseases  
7:30 p.m.—Treatment and Diagnosis of Diseases Caused by Rickettsiae and Certain Viruses: Discussion of the Pulmonary Manifestations of Certain Microbial Diseases — Dr. Theodore E. Woodward, University of Maryland

##### OCTOBER 24

- 4:00 p.m.—Office Dermatology  
7:30 p.m.—Management of Common Skin Diseases —Dr. Herman Beerman, University of Pennsylvania

##### OCTOBER 31

- 4:00 p.m.—Rapid Review of Recent Developments in Pediatrics  
7:30 p.m.—Feeding Problems in Infants and Children—Dr. Samuel F. Ravenel, Greensboro

##### NOVEMBER 7

- 4:00 p.m.—Fractures of the Elbow  
7:30 p.m.—Indications for Amputation and Rehabilitation of Amputees—Dr. T. Campbell Thompson, Columbia University College of Physicians and Surgeons

#### Goldsboro

##### OCTOBER 4

- 4:00 p.m.—Functional Uterine Bleeding  
7:30 p.m.—Hysterectomy: Indications and Contra-indications—Dr. H. Hudnall Ware, Jr., Medical College of Virginia

##### OCTOBER 11

- 4:00 p.m.—Management of Some Disorders of Cardiac Rhythm  
7:30 p.m.—Treatment of the Failing Heart—Dr. Harry Gold, Cornell University Medical School

##### OCTOBER 18

- 4:00 p.m.—Means of Diagnosis and Management of Certain Major Microbial Diseases

- 7:30 p.m.—Treatment and Diagnosis of Diseases Caused by Rickettsiae and Certain Viruses: Discussion of the Pulmonary Manifestations of Certain Microbial Diseases — Dr. Theodore E. Woodward, University of Maryland

##### OCTOBER 25

- 4:00 p.m.—Office Dermatology  
7:30 p.m.—Management of Common Skin Diseases —Dr. Herman Beerman, University of Pennsylvania

##### NOVEMBER 1

- 4:00 p.m.—Changing Trends in Abdominal Surgery  
7:30 p.m.—The Treatment of Diseases of the Thyroid Gland — Dr. George Crile, Jr., Cleveland Clinic Foundation

##### NOVEMBER 8

- 4:00 p.m. Fractures of the Elbow  
7:30 p.m. Indications for Amputation and Rehabilitation of Amputees—Dr. T. Campbell Thompson, Columbia University College of Physicians and Surgeons

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Dr. Charles Bruce Taylor joined the faculty at Chapel Hill in September as associate professor of pathology. He has held teaching appointments at the University of Minnesota and at the University of Illinois, and for the past several years has been associate attending pathologist at the Presbyterian Hospital in Chicago.

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Dr. Basil Lionel Truscott has been appointed assistant professor in anatomy. Dr. Truscott received his Ph.D. and M.D. degrees from Yale University, and has held teaching appointments at the Georgetown University Medical School and at Yale University.

\* \* \*

Dr. J. Logan Irvin, of the department of biological chemistry, was recently appointed research consultant with the Atomic Energy Commission at the Oak Ridge Institute of Nuclear Studies.

### NEWS NOTES FROM DUKE UNIVERSITY SCHOOL OF MEDICINE

A Japanese translation of a medical book by Dr. Wilburt C. Davison, dean of the Duke University Medical School, is soon to be published in Japan, it was announced recently.

Dr. Davison's book *The Compleat Pediatrician*, already in its sixth American edition, has become a classic in the field of pediatrics since its first publication in 1934. Translators of the Japanese edition are Dr. Shizuo Morishige and his associates Drs. Shigenobu Kuriyama, Sennosuke Shizume, and Tumiio Saito. It is being published by Mr. K. Inoue of the Nihonshonijishuppansha in the Wakodo Company.

\* \* \*

Two changes have been made in the Duke series of autumn lectures announced last month. Dr. Isaac Bigger, professor of surgery, Medical College of Virginia, will lecture on October 27, while Dr. Herman E. Pearce, professor of surgery, University of Rochester, will speak on November 10. This change was necessitated by a conflict in speaking engagements. The subjects of the two men will remain the same. Dr. Bigger speaking on "The Complications and Treatment of Pulmonary Cysts and Emphysematous Blebs and Bullae," and Dr. Pearce on "Medical Effects of the A-Bomb."



## NORTH CAROLINA STATE BOARD OF HEALTH

A call to arms against diphtheria has been sounded by Dr. J. W. R. Norton, State Health Officer, who, in a statement just issued, disclosed that North Carolina led the entire nation in the rate of cases reported for every 100,000 people in 1950. He cited figures recently released by the United States Public Health Service, showing that, last year, the case rate here was 12.4, as compared with a national rate of 3.9.

"This report," Dr. Norton said, "is a disgrace to North Carolina and should arouse the entire citizenship to action, if we mean to do our duty toward our infants and small children. Nothing but all-out war will suffice, and I am calling on our local health departments throughout the state to close ranks and attack diphtheria with every means at their command. I am asking that they step up the campaign for immunization until complete victory is achieved.

"The request that is being made of our local health departments is made of every citizen of the state, especially parents, guardians, and prospective parents. The time for positive action is now—not next month; not next week, but today. It is highly probable that the seriousness of the situation is known to but few people—those who have occasion to read U.S.P.H.S. reports, such as that from which the figures I have quoted were taken. Among all the forty-eight states in the Union, ten had a case rate last year of one, or less, as compared with North Carolina's 12.4.

"All children over three months of age should be immunized against diphtheria, whooping cough, and tetanus. All children under seven years of age who previously have been immunized should receive booster doses. Both whooping cough and diphtheria can be eliminated almost completely, if parents and guardians will cooperate. The immunizations for diphtheria and whooping cough can be combined with that for tetanus (lockjaw) so that all can be prevented at once. The reactions from injections are mild, and it seems that the effectiveness of each is enhanced by being given in combination with the others."

## NORTH CAROLINA LEAGUE FOR CRIPPLED CHILDREN

Plans are being completed for the annual meeting of the North Carolina League for Crippled Children to be held at the Hotel Sir Walter, in Raleigh, on November 29. D. Hiden Ramsey of Asheville, president of the League, will address the opening session of the conference on the subject, "The State's Duty to Its Handicapped Children." Other speakers will be distinguished leaders from the National Society of Crippled Children and Adults, specialists in the treatment and training of the handicapped.

\* \* \*

Dr. Landis S. Bennett of Raleigh has been appointed a trustee of the National Society for Crippled Children and Adults, as the representative of the North Carolina League for Crippled Children.

Dr. Bennett was born in Jackson Springs, North Carolina, and was graduated from North Carolina State College in 1930. He received his Ph.D. degree at the University of West Virginia and returned to North Carolina State College in 1940. He is now the head of the department of visual aids in the School of Agriculture.

Dr. Bennett attended the national convention of the Society of Crippled Children and Adults which was held in Chicago, Illinois, October 3-6.

## NORTH CAROLINA TUBERCULOSIS ASSOCIATION

### Executive Committee Refuses Forsyth Request

The Executive Committee of the North Carolina Tuberculosis Association in a special session at the State Office August 21 refused a request to allow its Forsyth County affiliate to participate in the Winston-Salem United Fund, a move which would eliminate the annual Tuberculosis Christmas Seal Sale.

\* \* \*

Nelson W. Stephenson, field secretary and publicity director of the North Carolina Tuberculosis Association for the past three years resigned recently to become consultant on community services with the North Carolina Board of Public Welfare. He will be succeeded by Hodson DeHaven Chinnis of Richmond, Virginia, a 1951 graduate of the University of North Carolina.

Another newcomer to the staff, but not to North Carolina, is Norman C. Gaskill of Goldsboro, North Carolina. Mr. Gaskill, who holds a M.S.P.H. degree from the University of North Carolina, was formerly Health Educator with the Wayne County Health Department. He replaces A. James Thomas who has been awarded a fellowship by the National Tuberculosis Association for a year's study at Wayne University in Detroit, Michigan.

## AMERICAN COLLEGE OF CHEST PHYSICIANS NORTH CAROLINA CHAPTER

The annual meeting of the North Carolina Chapter of the American College of Chest Physicians on October 31, 1951, will include an afternoon session beginning at 2:00 p.m. at the Veterans Administration Hospital, Oteen, and an evening session beginning at 8:00 p.m. at the Battery Park Hotel, Asheville. There will be a social hour and dinner at 6:30 p.m. at the Battery Park Hotel.

The following program has been arranged:

Case of Cardiac Arrest During Thoracic Surgery: Pathologic Report—Dr. Leo L. Leveridge, Oteen.

Pulmonary Tuberculosis and Pregnancy—Dr. C. D. Thomas, Black Mountain.

Streptomycin Treatment for Tension Cavity—Dr. Ralph E. Moyer, Oteen.

Some Observations on the Pathogenesis and Healing of Tuberculous Cavities—Dr. Benjamin Sandler, Oteen.

Benign Intrathoracic Lesions—Dr. V. K. Hart, Charlotte.

The Management of Symptomless Intrathoracic Lesions—Dr. Paul W. Sanger, Charlotte.

Movie picture session: 1. Traumatic Stricture of Right Main Bronchus; Empyema in a 14 Month Old Baby; Esophageal Fistula—Dr. Julian A. Moore, Asheville. 2. Excision of Giant Pulmonary Cyst; Excision of Mediastinal Tumor — Dr. James D. Murphy, Oteen.

## NORTH CAROLINA SURGICAL ASSOCIATION

The North Carolina Surgical Association had its meeting September 22, at Graystone Inn at Roaring Gap. The following program was given:

Dr. Felda Hightower presented "Diaphragmatic Hernia," Dr. Watts Farthing presented "Mesenteric Cysts," and Dr. Max Schiebel presented the "Treatment of Chronic Ulcerative Colitis."

The annual election of officers was held, and Dr. Donald Koonce of Wilmington was elected president, Dr. Gordon Sinclair of Raleigh, vice president, and Dr. Alex Webb, Jr., of Raleigh, secretary and treasurer.

## POSTGRADUATE COURSE IN CARDIAC DISEASES

A postgraduate course in cardiovascular diseases for rural practitioners was held at the Bowman Gray School of Medicine of Wake Forest College, September 25-27, under the sponsorship of the National Heart Institute, in cooperation with the North Carolina State Board of Health. Dr. Robert L. McMillan, of the Bowman Gray Medical School, was director of the course, which was attended by a selected group of physicians from North Carolina communities of less than 10,000 population.

The program was designed to correlate the various aspects of cardiac disease with the problems of the general practitioner. The faculty was drawn from the faculty of the Bowman Gray School of Medicine, each speaker relating the general subject to his particular specialty. In addition to the individual papers, the program included a clinicopathologic conference, a patient demonstration and work shop, a symposium, and numerous round table discussions.

A similar course will be offered March 25, 26, and 27. Applications for scholarships should be made to Dr. A. H. Elliott, Assistant Health Officer, North Carolina State Board of Health, Raleigh, North Carolina.

## MECKLENBURG COUNTY MEDICAL SOCIETY

The Mecklenburg County Medical Society will again present the Heineman Lectures this fall. The entire program will be held at the Hotel Charlotte in the Rose Room.

There is no registration fee and physicians are cordially invited to attend and to bring any in allied sciences who may be interested in these talks.

The following meetings have been scheduled:

### Friday, October 19, 1951, 8:00 p.m.

Dr. Sara M. Jordan, Lahey Clinic, Boston; Dr. Samuel F. Marshall, Lahey Clinic, Boston—"Lesions of the Upper Gastrointestinal Tract—Treatment: Medical and Surgical"

### Friday, October 26, 1951, 8:00 p.m.

Dr. Jefferson Browder, Long Island Hospital, New York—"Surgical Management of Intractable Pain"

Dr. Howard Ulfelder, Massachusetts General Hospital, Boston—"Principles in the Diagnosis and Treatment of Carcinoma of the Cervix and Uterus"

### Friday, November 2, 1951, 2:00 p.m.

Symposium: "The Application of Basic Sciences to Clinical Practice"

Dr. Richard L. Riley, Johns Hopkins University, Baltimore—"Fundamentals of Cardio-Pulmonary Physiology"

Dr. Monroe Romansky, George Washington University, Washington—"Principles of Antibiotic Activity and the Choice of Antibiotic Agents in Therapy"

Dr. Armand J. Quick, Marquette University, Milwaukee—"The Blood Clotting Mechanisms; the Diagnosis and Treatment of Disturbances of Hemostasis"

Commander John L. Tullis, Bethesda, Maryland—"The Pathology of Radiation Injury; Therapeutic Implications"

### Friday, November 2, 1951, 8:00 p.m.

Discussion Panel: Moderator, Dr. Joseph C. Aub, Massachusetts General Hospital, Boston

## EIGHTH DISTRICT MEDICAL SOCIETY

The Eighth District Medical Society met at the Robert E. Lee Hotel in Winston-Salem on October 18. The afternoon session was devoted to a scientific program consisting of the following papers: Skin Cancer—Dr. George W. James; Headaches: Practical Suggestions as to Diagnosis and Treatment—Dr. V. W. Taylor, Jr.; The Management of Defects of the Common Bile Duct—Dr. Richard T. Myers; The Challenge of Rocky Mountain Fever—Dr. Samuel F. Ravenel; Diagnosis and Treatment of Urinary Tract Infections—Dr. Fred K. Garvey.

A dinner was held at 7:00 p.m., at which time Dr. I. G. Greer was the speaker.

## NINTH DISTRICT MEDICAL SOCIETY

The Ninth District Medical Society held a meeting at the Hickory Country Club on September 27, at which the following scientific program was presented: Principles of Water Balance—Dr. Weston M. Kelsey, Winston-Salem; ACTH and Cortisone—Dr. Ernest Yount, Winston-Salem; Certain Surgical Procedures in the Treatment of Chronic Polio-myelitis—Dr. George R. Miller, Gastonia; a clinicopathologic conference—Dr. John C. Reece, Morganton, and Dr. Millard Riggs, Drexel.

Newly elected officers for 1952 are Dr. William H. Kibler, president, succeeding Dr. J. H. Shuford; and Dr. E. W. Phifer, secretary-treasurer, succeeding Dr. J. S. Lewis. The society is scheduled to meet in Morganton, September, 1952.

## NEWS NOTES

The new Gaston Memorial Hospital was formally dedicated on September 29, with the Honorable William B. Umstead, former United States senator, as the principal speaker. Mr. Umstead was introduced by the Honorable R. Gregg Cherry, former governor of North Carolina.

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Dr. W. J. Highsmith, Jr., has opened his office for the general practice of medicine at Hamilton, North Carolina.

\* \* \*

Dr. Ira Ben Miller has announced the opening of his office at 517 Main Street, High Point, North Carolina. His practice will be limited to internal medicine.

## WESTBROOK SANATORIUM

The officers and staff of Westbrook Sanatorium, Richmond, Virginia, were host at a barbecue supper, in celebration of the fortieth anniversary of the institution, on Friday, October 5, 1951.

## AMERICAN COLLEGE OF CHEST PHYSICIANS

The fourth annual postgraduate course sponsored by the Council on Postgraduate Medical Education and the New York State Chapter of the American College of Chest Physicians will be held at the Hotel New Yorker, New York City, November 12-17. Application should be made to the College at 112 East Chestnut Street, Chicago 11, Illinois.

## AMERICAN COLLEGE OF CHEST PHYSICIANS SOUTHERN CHAPTER

The Southern Chapter of the American College of Chest Physicians will hold its eighth annual meeting at the Adolphus Hotel, Dallas, Texas, November 4-5. The chapter will meet jointly with the Southern Medical Association, whose annual meeting will be held November 5-8.



## AMERICAN ACADEMY OF OBSTETRICS AND GYNECOLOGY

The National Federation of Obstetric-Gynecologic Societies has reconstituted itself as The American Academy of Obstetrics and Gynecology. This action was taken at the Federation meeting held on June 13, 1951, in Atlantic City in response to the long felt need for a national society for obstetricians and gynecologists based on individual and personal membership.

The following officers were elected at this meeting:

President—Woodard D. Beacham, New Orleans, Louisiana

President-Elect—Carl P. Huber, Indianapolis, Indiana

Vice President—Louis H. Douglass, Baltimore, Maryland

Treasurer—Herbert E. Schmitz, Chicago, Illinois

Secretary—Ralph A. Reis, Chicago, Illinois

Executive Board—Robert G. Craig, San Francisco, California

John L. Parks, Washington, D. C.

Charles D. Kimball, Seattle, Washington

Samuel B. Kirkwood, Winchester, Massachusetts

Philip F. Williams, Philadelphia, Pennsylvania

The Academy was incorporated on August 4, 1951, as a non-profit corporation under the laws of the State of Illinois. Its objects are listed in the Constitution and By-Laws, which were adopted at a meeting held at Hot Springs, Virginia, on September 5, 1951. They include "fostering and stimulating interest in obstetrics and gynecology and all aspects of the work for the welfare of women which properly come within the scope of obstetrics and gynecology."

The first business meeting of the Academy will be held at the time of the meeting of the American Congress on Obstetrics and Gynecology in Cincinnati, March 31 through April 4, 1952. The first annual clinical meeting will be held in Chicago, Illinois, during the winter of 1952-1953.

Applications for Fellowship may be obtained from the Secretary's office, 116 South Michigan Avenue, Chicago 3, Illinois.

## AMERICAN PUBLIC HEALTH ASSOCIATION

The technical and scientific knowledge that makes our country one of the healthiest among nations will be highlighted when the American Public Health Association holds its seventy-ninth annual meeting in San Francisco, October 29 to November 2. Dr. Reginald M. Atwater, Executive Secretary of the Association, has announced.

The eighteenth annual meeting of the Western Branch of the Association and the annual meetings of thirty-eight related organizations will be held at the same time. All meetings will take place in the Civic Auditorium and the Palace and Whitcomb Hotels in San Francisco.

The American Public Health Association is the professional society of more than 12,000 men and women in public health work in the United States, Canada, Mexico, and Cuba. The annual meeting is the largest assembly in the world of public health workers. More than 400 speakers and discussants will participate in the sessions, workshops, and panel discussions.

## AMERICAN COLLEGE OF SURGEONS

Twenty-six hospitals in San Francisco and East Bay communities and the medical schools of the University of California and Stanford University are planning clinics, demonstrations, postgraduate courses, and other events for the surgeons and hospital personnel who will attend the thirty-seventh Clinical Congress and the thirtieth Hospital Standardization Conference of the American College of Surgeons November 5 to 9 in San Francisco.

## AMERICAN TRUDEAU SOCIETY

The American Trudeau Society, Medical Section of the National Tuberculosis Association, invites the submission of scientific and clinical titles for presentation at its next annual meeting, in Boston, week of May 26, 1952, at the Hotel Statler. Abstracts of titles for this 1952 meeting, or completed papers, must reach the chairman, Medical Sessions Committee, American Trudeau Society, 1790 Broadway, New York, New York, not later than January 1, 1952. Abstracts should be limited to 300 words, at the most.

All abstracts and papers will be reviewed by the committee for selection of the most interesting material. Papers not selected for reading on the program will be presented by title and read, if time permits. Subjects for presentation will include all clinical and scientific aspects of tuberculosis, non-tuberculous respiratory and cardiac disease as well as the results of investigative work with some bearing upon these subjects.

## NATIONAL SOCIETY FOR CRIPPLED CHILDREN AND ADULTS

The vital role of the crippled in the national defense effort shared the spotlight with advances in the treatment and training of crippled children at the annual convention of the National Society for Crippled Children and Adults, the Easter Seal Agency, in Chicago's Palmer House, October 3-5.

Nationally known authorities in both fields were featured speakers on a program which marked the National Society's thirtieth year of service to the crippled. Dr. Theodore G. Klumpp, president of the New York chemical firm of Winthrop-Stearns, Inc., and chairman of the President's newly formed Task Force to mobilize the handicapped for defense employment, spoke on the role of industry and management in employment of the crippled. An actual clinic demonstration of handicapped workers in industry was conducted by Dr. George G. Deaver, past president of the American Academy for Cerebral Palsy, and professor of physical medicine and rehabilitation, New York University College of Medicine. Mary Switzer, director of the United States Office of Vocational Rehabilitation, Washington, D. C., and Henry Viscardi, executive director of "Just One Break for the Disabled" committee, New York University—Bellevue Medical Center, described the role that volunteer agencies can play in defense mobilization.

A special feature of the convention was a series of professional seminars covering the subjects of diagnosis of cerebral palsy in the young adult, daily living activities for the crippled child, physical therapy, occupational therapy, speech therapy, social and emotional problems, and special education. Among the participants was Edna M. Blumenthal, director of rehabilitation, North Carolina Hospital for Cerebral Palsy, Durham.

## NATIONAL FOUNDATION FOR INFANTILE PARALYSIS

The National Foundation for Infantile Paralysis announces the availability of a limited number of additional postdoctoral fellowships to candidates whose interests are research and teaching in medicine and the related biological and physical sciences. The purpose of these National Foundation fellowships is to increase the number of professional workers qualified to give leadership in the solution of basic and clinical research problems of poliomyelitis and other crippling diseases.

The fellowships cover a period of from one to five years. Stipends range from \$3,600 to \$7,000 a year, with marital and dependency status considered in determining individual awards. Institutions which accept Fellows receive additional compensation for expenses incurred in relation to their training programs.

Eligibility requirements include United States citizenship (or the declared intention of becoming a citizen), sound health and an M.D., Ph.D., or an equivalent degree.

Complete information concerning qualifications and applications may be obtained from: Division of Professional Education, The National Foundation for Infantile Paralysis, 120 Broadway, New York 5, New York.

## AMERICAN DIABETES ASSOCIATION

The high cost of meats need not force people to cut down the amount of protein they eat, since less expensive but equally nutritious meat substitutes are easily available, according to an article in the September issue of the A.D.A. *Forecast*, America's only national magazine for people who have diabetes.

Written by the *Forecast's* dietary expert, Deaconess Maude Behrman of Philadelphia's Lankenau Hospital, the article presents a list of protein-rich foods other than meat, and gives the quantities in which one equals one ounce of meat in protein value. A quarter of a cup of cottage cheese, for example, equals an ounce of beef, lamb, or pork. Other substitutes listed run the gamut from oysters to eggs, from peanut butter to sardines.

Deaconess Behrman points out that for diabetics, to whom any reduction in protein intake could easily cause trouble, the small cans of diced meats for babies provide excellent single-person portions of protein. They should be particularly useful for diabetics living alone, and for those in families who use non-protein meat substitutes. The A.D.A. *Forecast*, in which Deaconess Behrman's article appears, is a bimonthly magazine published in the interest of diabetics everywhere by the American Diabetes Association, Inc., at 11 West 42nd Street, New York 18, New York. First published in 1948, it has by now a circulation of nearly 20,000 readers.

## AMERICAN MEDICAL WRITERS' ASSOCIATION

Dr. Lewis J. Moorman of Oklahoma City, secretary of the Oklahoma State Medical Association, editor of the *Journal of the Oklahoma State Medical Association*, and former Dean and Professor of Medicine, University of Oklahoma School of Medicine, was elected president-elect of the American Medical Writers' Association at the eighth annual meeting held in Peoria, Illinois, on September 19. The other officers elected were Dr. Jacob E. Reisch of Springfield, Illinois, first vice president; Dr. J. Spencer Felton of Oak Ridge, Tennessee, second vice president; Dr. Harold Swanberg of Quincy, Illinois, secretary-treasurer (re-elected); Dr. Lee D. Van Antwerp of Chicago, editor; Dr. Norbert

C. Barwasser of Moline, Illinois, accounting officer. Those elected members of the Board of Directors were: Dr. John R. Miner, Rochester, Minnesota; Dr. Wallace Marshall, Two Rivers, Wisconsin; Dr. Everett M. George, Des Moines, Iowa; Dr. Norris J. Heckel, Chicago; Dr. Theodore R. Van Dellen, Chicago; Dr. C. W. Schumacher, St. Louis; Dr. M. Pierce Rucker, Richmond, Virginia; and Miss Helen Penn, St. Louis.

The papers read at the Peoria meeting will be published in the January 1952 issue of the *Mississippi Valley Medical Journal* (Quincy, Illinois). Further details of the Association may be secured from the Secretary, Harold Swanberg, M.D., 209-224 W.C.U. Bldg., Quincy, Illinois.

## MISSISSIPPI VALLEY MEDICAL SOCIETY

Dr. Grayson L. Carroll, nationally known urologist and teacher of St. Louis University School of Medicine, has been honored by the Mississippi Valley Medical Society as its Distinguished Service Award Recipient for 1951. The award, consisting of a gold medal and a certificate, was presented to Dr. Carroll at the banquet on the occasion of the sixteenth Annual Meeting of the Society at the Pere Marquette Hotel, Peoria, Illinois, September 20. Dr. Carroll is associate professor of urology, St. Louis University, head of the department of Urology at St. Louis City Hospital, and was president of the Mississippi Valley Medical Society in 1946.

## MISSISSIPPI VALLEY MEDICAL JOURNAL

The November issue of the *Mississippi Valley Medical Journal & Radiologic Review* (Quincy, Illinois), is the fourth annual "Radiation Therapy" number of that publication. This special issue is limited to original, practical papers on radiation therapy contributed by leading specialists. All the papers have been especially written for this number and are designed to appeal to physicians in the general practice of medicine and surgery.

## DEPARTMENT OF THE ARMY Walter Reed Centennial Observed Throughout Nation

The centenary of the birth of Major Walter Reed was marked throughout the country September 13 in observances recalling the great physician's successful struggle to determine the mode of transmission of yellow fever. On the same day the showplace of American military medicine and research, formerly known as the Army Medical Center, Washington, D. C., was officially renamed the Walter Reed Army Medical Center.

In Washington September 13 was designated Walter Reed Day by the District of Columbia Board of Commissioners in a ceremony attended by Major General Walter Reed, son of Major Reed and former Inspector General of the Army. The Army Medical Museum simultaneously presented a special exhibit depicting Major Reed's work, and the Medical Center held open house in his honor.

The New York University College of Medicine, from which Major Reed received his second medical degree in 1870, also exhibited relics of his experiments in a public display at 477 First Avenue, New York.

At Major Reed's birthplace at Belroi, Virginia, Brigadier General Earle Standlee, Surgeon of Army Field Forces, Fort Monroe, Virginia, read a message from General Streit to a large gathering, including hospitalized veterans from Korea, who participated in the ceremony sponsored by the Virginia Medical Society, the Gloucester County Junior Chamber of Commerce and the Medical Center. At Harrisonburg,



Virginia, Colonel Joseph U. Weaver, deputy commander of the Medical Center, led a parade from the former Reed homestead at Stoneleigh, now a Veterans Memorial Home, to Walter Reed Hall on the campus of Madison College where he spoke briefly.

The Board of Supervisors of Gloucester, Virginia, near Belroi, also declared the thirteenth Walter Reed Day, and supervised a commemorative program of speeches and a concert by the Army band from Fort Monroe, Virginia. Murfreesboro, North Carolina, birthplace of Major Reed's wife, was another town to proclaim a Walter Reed Day.

### VETERANS ADMINISTRATION

Veterans Administration recently announced that approximately 5,000 employees had been dropped from the agency's payroll by October 10, 1951, because of budget limitations contained in V-A's appropriation for the 1952 fiscal year. The appropriation measure, covering the period from July 1, 1951, to June 30, 1952, inclusive, was signed by the President August 31.

The reduction will be nationwide, and will include all administrative activities of V-A. Excluded from the cut are Department of Medicine and Surgery personnel who staff the V-A's 151 veterans hospitals throughout the country.

### FEDERAL SECURITY AGENCY

#### Public Health Service

Death rates in the United States for several important diseases—including acute poliomyelitis, tuberculosis, and measles—fell significantly in 1950 as compared with 1949.

The death rate for acute poliomyelitis, per 100,000 population, fell off by 39 per cent in 1950. In actual numbers there were 2,720 polio deaths in 1949, and 1,690 estimated for 1950. This is believed to parallel a drop in cases reported in 1950 compared with 1949. The tuberculosis death rate dropped 16 per cent, for an estimated decrease of 5,470 deaths. The death rate for measles was cut in half, coinciding with a decline in the number of cases of measles in 1950.

Other important causes of death with decreases in death rates were gastritis and some intestinal diseases, cirrhosis of the liver, complications of pregnancy, and homicide. The maternal death rate, per 10,000 live births, dropped from 9.0 in 1949 to an estimated rate of 7.2 in 1950, a record low.

Death rates for influenza and pneumonia for 1950 increased slightly over 1949, probably as a result of the influenza epidemic during the late winter and early spring months of 1950. The death rate for diseases of the heart also increased slightly, while the rate for cancer remained at about the same level in both years.

\* \* \*

The nation's defenses against outbreaks of epidemic diseases have been strengthened by the establishment of an Epidemic Intelligence Service in the Public Health Service, it was announced recently.

Twenty-one new Public Health Service medical officers have recently completed an intensive eight week training course in Atlanta, Georgia, headquarters of the Communicable Disease Center. They have been assigned posts in the newly organized service and have taken up their stations in twelve states this month.

\* \* \*

Appointment of Dr. Pearce Bailey as Director of the National Institute of Neurological Diseases and Blindness has been announced by Dr. W. Palmer Dearing, acting Surgeon General of the Public Health Service.

Dr. Bailey will be the first director of this Institute, which was established by an Act of Congress

last summer as one of the National Institutes of Health. Dr. Bailey assumed his new post on October 3, 1951.

Dr. Bailey is president of the American Academy of Neurology, which he was instrumental in founding in 1948. He is a member of many other medical societies, including the American Neurological Association, the author of many papers, and served as United States Delegate to the International Poliomyelitis Congress, New York, 1948, and to the Fourth International Neurological Congress, Paris, 1949.

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Over 800 cases of malaria among military personnel returning from Korea have been reported by state health authorities in recent weeks, Dr. Leonard A. Scheele, Surgeon General of the Public Health Service, said recently.

"Seven states alone reported over 600 new cases in a single month—July—and most of these were contracted outside the United States," said Dr. Scheele. The seven states are: Arkansas, 38; Colorado, 65; Georgia, 237; Kentucky, 97; Oklahoma, 101; Oregon, 29; and Wisconsin, 60. Total: 627.

Dr. Scheele said it is difficult to determine precisely the number of service-connected cases because reports from some states do not distinguish between military and non-military cases, or between those acquired in this country and abroad.

"Despite the lack of complete data, reports to date emphasize the need for effective control measures," Dr. Scheele pointed out.

The Surgeon General pointed out that whereas provisional figures in the National Office of Vital Statistics for the month of July show a total of 842 cases, the total for all states for the first six months of 1951 is 737.

### Isolation of Encephalitis Virus

Researchers of the Communicable Disease Center, Public Health Service, have isolated the virus of encephalitis from wild birds under natural conditions, it was announced recently by Leonard A. Scheele, Surgeon General of the Public Health Service, Federal Security Agency.

It has been suspected for many years that birds harbor the virus, but this is the first time that their role definitely has been proven, according to Dr. T. Aidan Cockburn, epidemiologist in charge of encephalitis studies, office of Midwestern CDC Services, Kansas City, Kansas.

The encephalitis unit at Greeley, Colorado, under Dr. Cockburn's direction, has reported the isolation of virus twice from redwing blackbirds and once from magpies. The virus, which is a type known as Western equine, also was recovered from two batches of mosquitoes and one batch of mites, for a total of six isolations, all from Weld County, of which Greeley is the county seat. The laboratory work was performed by the CDC virus and rickettsia laboratory at Montgomery, Alabama.

Man and horses are infected with the virus after being bitten by certain species of mosquitoes, according to Dr. Cockburn. Mites, lice, and ticks also become infested, adding to the complications involved in studying the disease. Wild birds, now proven to harbor the virus, do not become "sick," but act only as carriers, from which mosquitoes can acquire the virus.

According to Public Health Service figures, the incidence of encephalitis in the United States increased in 1950 for the second consecutive year. Dr. Cockburn said that the increase possibly was due to better recognition of the disease.

In 1948 there were 575 reported cases; in 1949, 781 cases; and in 1950, 1,051 cases. Many thousands more are believed to have gone unrecognized, or to have been erroneously diagnosed as poliomyelitis.

Successful use of an artificial heart and lungs to tide over circulation of blood in patients undergoing critical heart and general chest surgery can be expected in the near future, possibly within a year, scientists attending a symposium on artificial heart-lung machines predict. The symposium was held at the National Institutes of Health, Public Health Service.

The prediction highlights a report on the symposium made by its chairman, Doctor Frederick A. Collier, Chief of the Department of Surgery at the University of Michigan, Ann Arbor.

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Thirty-eight administrators of federal hospitals will attend the fourth Inter-Agency Institute for Hospital Administrators which will be held at the Federal Security Agency, Washington, D. C., for a three week period beginning October 29, 1951. Dr. Leonard A. Scheele, Surgeon General of the Public Health Service has announced.

#### New Way Used in Korea to Cleanse G.I.'s Wounds

A new method for rapid cleansing of wounds under battlefield conditions is proving of "great use in the field," the commander of a medical unit at the Korean front has reported.

He is a major in the Medical Corps and battalion surgeon to a combat engineer team of 500 men. For security reasons, his name and unit were not disclosed.

The surgeon said the method also is bringing relief to G.I.'s from such skin infections as folliculitis, complicated by infrequent changes of clothing.

As reported, the method employs for the first time in the field a germ-killing soapless detergent widely used by surgeons in American hospitals as a pre-operative scrub.

The technique was revealed in communications received here by Dr. B. Thurber Guild, associate medical director of Winthrop-Stearns, Inc., which developed the detergent, called pHisoHex.

Originally developed for operating teams in hospitals, where it has cut scrub time from ten to two minutes, pHisoHex is widely prescribed by dermatologists for patients who cannot use soap without ill effects. It is also used by nurses to prevent cross-infections in nurseries.

The new squeeze bottle was introduced for visiting nurses' and doctors' emergency bags. It is unbreakable and dispenses economically in drops.

pHisoHex is said to cleanse more rapidly and with greater thoroughness than soap, and unlike soap, is equally effective in hard or even sea water. Suds are developed by adding repeated small amounts of water, with gentle rubbing, after the hands have been spread with the detergent.

## AUXILIARY

### PUBLIC RELATIONS PROGRAM

In April of 1923, when Mrs. Paul Priestly McCain organized the Auxiliary to the Medical Society of the State of North Carolina, our by-laws read as follows:

"Section I—The objects of this organization shall be to interpret the aims of the medical profession to other organizations interested in the promotion of health education; to assist in the entertainment at the meetings of the Medical Society of the State of North Carolina; to promote friendliness among the families of the medical profession; and to do such work as may from time to time be approved by the Advisory Committee appointed by the Executive Committee of the Medical Society of the State of North Carolina."

Our chief purpose in being organized at that time was to add a social side to the Medical Society meetings and, by giving the wives a part in the program, to attract more doctors to the scientific meetings. We were being used to sweeten the medicine, shall we say. We still consider this an important part of our function—but we have matured since those days. The doctors who helped to draw up our constitution had realized our potentialities when they wrote "and to do such work as may from time to time be approved by the Advisory Board" . . . etc. This gave them leeway to enlarge the scope of our endeavors.

This year the Advisory Board of the Medical Society of the State of North Carolina is composed of Dr. Rachel Davis of Kinston, chairman, Dr. Raney Stanford of Durham, and Dr. Olivia Abernathy of Elkin. This very able committee took time from their busy lives to meet in Durham and talk over the projects we shall undertake as our program for 1951-1952. They made suggestions and, with the aid of Mr. Leroy Cox, public relations director for the Medical Society, and Mr. James T. Barnes, executive secretary of the Medical Society, gave us a public relations program. We are giving you this program, in a condensed form, because we believe that doctors are interested in knowing what we are doing, and because we hope that members-at-large in the Auxiliary will read this page and be inspired to help their district councilor in organizing an active auxiliary in their communities. What better task could we set our hand to than furthering the profession of our husbands?



#### For Shy, Nervous, Retarded Children



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*Suggested Public Relations Program*

1. Form educational contacts and disseminate information and literature to all overlapping womens' organizations (P.T.A., A.A.U.W., etc.).
2. Distribute educational literature in doctors' offices, hospitals, hotels, beauty shops, schools, public and semi-public libraries, and meeting quarters of overlapping organizations.
3. Promote nurse recruitment, Student Loan Fund, and scholarships.
4. Promote "Health Day."
5. Promote the organization of county health councils under Rural Health.
6. Establish speakers' bureaus in each county, inform public of these bureaus and available speakers. Speakers should be Auxiliary members or informed people of proper concepts from without Auxiliary.
7. Sponsor Fair booths for education on health, medicine, and nurse recruitment.
8. Use audio-visual aids in health education; i.e., radio, television, and motion pictures.
9. Obtain wider distribution of the Auxiliary *News Letter* and place a copy in the hands of every member and prospective member.
10. Promote and assist the passage of proper legislation — positive with emphasis; negative with reserve.
11. Assist in the care of the aged, blind, and disabled by visits and donations.
12. Join and be active in the local hospital guild. This is an excellent way to promote good public education and public relations.
13. Do volunteer work in your hospital.
14. Continue to procure resolutions against socialized medicine and send them to the proper persons. Every member should write and get one other person to write to her congressman and senator once a year, telling them she is against socialization of medicine or any other proposed step which is against our American way of life. Be conscious of the fact that socialization of medicine will be a plank in the 1952 Democratic platform. VOTE.
15. Interest prominent laymen and women in your local auxiliaries, and enlist them in your speakers' bureaus.
16. Encourage all members of the Auxiliary to be joiners and doers in all worthwhile community organizations.
17. Promote the sale of *Today's Health*—a medium of education to the laymen.
18. Participate in Civil Defense organizations and practices.
19. Volunteer aid in health centers, such as cancer detection centers, heart centers, and the like.
20. Conduct educational inspection tours of local medical health services.
21. Educate yourself as to the essential doctor-hospital, doctor-nurse, doctor-patient, and doctor-public relations.
22. Promote good will and essential discipline within and among doctor families in order to develop public grace.

*A word from Mr. Cox:* "Believing as I do that the Auxiliary is potentially the physicians' best source of good public relations, good work should always be the corner stone of operation for each Auxiliary."

As you can readily see, the above is an extremely comprehensive program. There is a tremendous opportunity for each and every one of us. I urge all of you from the bottom of my heart to study this and set your minds to the task which confronts us all.

MRS. B. W. ROBERTS, *President*

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## Classified Advertisements

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## BOOK REVIEWS

**Practical Haematology.** By J. V. Dacie, Department of Pathology, Postgraduate Medical School of London. 172 pages, illustrated. Price, \$3.40. New York: Chemical Publishing Company, 1950.

If one does not read Dr. Dacie's preface he may be led to make unjustified remarks about this slender volume. Its author is a well known British hematologist whose work on hemolytic anemias has received particular attention. He states that the book is an outgrowth of notes prepared for a one year course in hematologic techniques and interpretation given to applicants for a London University Diploma in Clinical Pathology. Subjects seeming to belong to morphology or medicine have been omitted, and no comprehensive review of methods is attempted. The methods described, often only one for each determination, are those used by Dr. Dacie in his daily work.

The reviewer objects to the use of so pragmatic a term as "practical" in the title of this book. The measurement of red cell diameters, which may be quite practical for Dr. Dacie, is not a practical determination for 95 per cent of his readers and yet a chapter is devoted to this subject. An outstanding feature of the book is the excellent discussion of the errors inherent in the various determinations; yet the author is occasionally uncritical in his choice of a determination, which is as much an offense to statistics as reporting a red count to too many figures. For instance, while dismissing the measurement of clot retraction as of minor practical importance, he gives a quantitative method for its determination which hardly any laboratory will wish to use, and he does not mention the usual simple technique of doing it. For these reasons, as well as such minutiae as using waxed Pastuer pipettes, a suggestion which will cause any technician to rapidly turn the page, the book cannot be recommended to one group the author aimed for, the average laboratory technician.

For the experienced laboratory worker in hematology, be he physician or technician, with sufficient background to contrast Dr. Dacie's methods with the others in use, this book will be a real pleasure to read and an occasional source of methods. Persons in this category will appreciate the insight Dr. Dacie has into the foibles of laboratory workers and those who use the laboratory, and will appreciate his evaluation of methods he has obviously used and not merely read about. For these people the book cannot be too highly recommended. It is not, however, for those who are instantly attracted by the "practical" in the title.

**Physical Examination in Health and Disease.** By Rudolph H. Kampeier, M.D. 820 pages, with 550 illustrations. Price, \$8.00. Philadelphia: F. A. Davis Company, 1950.

The author has justified the publication of another textbook of physical diagnosis as an attempt to "give the reason—anatomic, physiologic, or pathologic and for physical manifestations when the cause is not obvious," and has altered his presentation of the material from that of the usual text by alternating between consecutive chapters the technique of examination and a description of the normal with that of the abnormal findings which may be encountered. The abnormal findings are then related to the pathologic change.

The book is designed primarily for the second year student of physical diagnosis rather than more advanced students or physicians, and, to this end,

it serves its purpose well. The text is well printed, contains an adequate number of excellent illustrations, and is marked by an unusual facility of presentation, which will make it of value to the student of medicine for whom it is designed.

**Practical Clinical Psychiatry.** By Edward A. Strecker, M.D., Professor of Psychiatry, School of Medicine, University of Pennsylvania; Franklin G. Ebaugh, M.D., Professor of Psychiatry, University of Colorado, School of Medicine and Director, Colorado Psychopathic Hospital; and Jack R. Ewalt, M.D., Professor of Neuropsychiatry and Administrator of Hospitals, University of Texas Medical Branch, Galveston. Ed. 2. 506 pages. Price, \$7.00. Philadelphia: The Blakiston Company, 1951.

As stated in the preface to the seventh edition of this textbook on psychiatry, it is aimed, not only at the student and practitioner in psychiatry, but at the general practitioner and the other specialists in the field of medicine as well. The authors recognize the great need in the world today for psychiatric understanding and realize that there probably never will be enough fully trained psychiatric specialists to fill the need. So it devolves upon the medical profession generally to do what they can to understand and deal with the psychic as well as somatic aspects of medicine in the treatment of their patients. This textbook represents the culmination of many years of effort in bringing together the essential material for a proper background and understanding of psychiatry, and presents it in such a simple and direct form as to be understandable and helpful to all who are interested in the service of their fellow man. This seventh edition brings this work up to date.

There are two notable additions in this edition. First, a very excellent summary of what is now known and generally accepted of psychopathology has been included in the first chapter on "Personality Development and Function." It is so readable and simply expressed that even those who have had little or no training in this field can follow and understand. Second, a whole chapter, number thirteen, has been devoted to what the authors call "support" psychotherapy, some of which, in very brief form, had been included in the therapy section of the chapter on the psychoneuroses in earlier editions. This is perhaps the most outstanding contribution in this seventh edition. It serves well the purpose for which it is intended, as a practical guide to all physicians in examining their attitudes and capabilities and in making a sound, workable approach to psychotherapy. There are many valuable suggestions regarding the approach to the patient and his problem, and methods of helping the patient to grow in understanding of himself and his illness. It takes much of the mystery out of the term psychotherapy and brings some of the methods within the scope of the general physician, thus increasing his effectiveness.

There are other changes. The book has been thoroughly revised. The classification is brought right up to the present—a dynamic approach to this problem, with every effort made to avoid a static, stereotyped nosology. New case material has been added, and the text has been altered in many places to conform to present day investigation and thinking. The unnecessarily detailed descriptions of the older, mostly outdated, methods of treatment of neurosyphilis, for example, have been deleted from this edition. As a painstaking and thorough revision of an excellent work, this seventh edition is a testimony in itself.



**Parasitic Infections In Man.** Edited by Harry Most, M.D. 229 pages. Price, \$4.50. New York: Columbia University Press, 1951.

In May, 1947, the Fellowship of the New York Academy of Medicine approved the organization of the Section on Microbiology. This Section is primarily concerned with bacteriology, mycology, parasitology, immunology, chemotherapy, diseases of obscure etiology which are possibly of infectious origin, and pathology related to microbiology.

This book is a collection of papers by fourteen outstanding workers in the field of parasitology presented at the Fourth Symposium of Microbiology sponsored by the New York Academy of Medicine. The papers have been edited by Dr. Harry Most, professor of preventive medicine at the New York University—Bellevue Medical Center.

The first paper is by Paul F. Russell, and deals with the importance of parasitic diseases in world health.

The second paper, by Clay G. Huff, is concerned with the significance of the new findings in the life cycle of the malarial parasite.

The third and fourth papers, by James T. Culbertson and John Bozicevich, respectively, deal with immunology and immunologic diagnosis of parasitic infections.

In the fifth paper, Norman R. Stoll discusses the problem of diagnosis of intestinal parasites.

The physiology and metabolism of various protozoa and helminths are discussed in the next five papers.

The last four papers are probably of the greatest general interest, for they are a review of the therapeutic agents used in the treatment of amebiasis, malaria, filariasis, intestinal helminthic infections, and schistosomiasis.

The title of the book is somewhat misleading, for it suggests a textbook of clinical parasitology, which it definitely is not. Actually, the book is a summary of current perspectives relating to the physiology of some of the animal parasites and to the diagnosis and treatment of various parasitic infections.

**Papain.** By M. L. Tainter, C. E. Alford, A. Arnold H. Blumberg, O. H. Buchanan, E. T. Hinkel, Jr., K. Hwange, A. C. Ivy, R. K. Lager, J. R. Schmitz, J. R. Shepherd, J. S. Wyzen and C. Zippin. 154 pages, illustrated. Price, \$3.00. New York: The New York Academy of Sciences, 1951.

This small paper bound volume is a summary of the current status of the knowledge on papain, a product prepared from the milk of the green papaya—a tropical fruit. The substance is of interest since papain is a proteolytic enzyme which is remarkably thermostable. It has been used in industry.

The natives of the tropics use crude papain both for its digesting action on food proteins—as in the tenderizing of meat—and for its local action on exudates such as the crust on infected burns. A series of ten articles by various authors describes methods for measuring the proteolytic activity and the effect of various factors such as temperature, drying, and the addition of chemicals on the activity of the enzymes.

**Emotional Factors in Cardiovascular Disease.** By Edward Weiss, M.D. Professor of Clinical Medicine, Temple University School of Medicine. 84 pages. Price, \$2.25. Springfield, Illinois: Charles C. Thomas Company, 1951.

This monograph by one of the foremost authorities on psychosomatic medicine sums up admir-

ably our present concepts of the subject. After two brief introductory chapters, Dr. Weiss discusses "functional" heart disease, the so-called neurocirculatory asthenia; hypertension and anxiety, and anxiety and organic heart disease. Hypertension is dismissed with a chapter of less than two pages, and psychosis in heart disease with a single paragraph.

This little book is well written. It gives the essence of the subjects under discussion without any "padding," and is well worth a careful reading in its entirety. Its beautiful format, together with the author's clear style, make reading it a pleasure.

**Spatial Vector Electrocardiography.** By Robert P. Grant, M.D., and E. Harvey Estes, Jr., M.D. 149 pages. Price, \$4.50. Philadelphia: The Blakiston Company, 1951.

This compact volume explains the theory of vector interpretation, the relationship of vector calculation to the limb and precordial leads, and the loop pattern followed by the vector in the course of the generation of the QRS and T deflections in the electrocardiogram. The characteristics of the spatial vectors in the normal subject and in various abnormalities are discussed.

One objection which the reviewer has to the vector method is that, in essence, it assumes the heart to be located in a relatively homogeneous conductor. This reviewer believes, on the contrary, that the extremities and the chest leads act as if they were seeing or "making contact" with relatively small areas of the heart. However, this does not vitiate the conclusions which are arrived at by empirical correlation between the observed vectors and the actual clinical postmortem findings in the hearts.

The book is written so as to be readily understandable and may be of assistance to the physician and medical student in the understanding of electrocardiography.

**Friend of the People: The Life of Dr. Peter Fayssoux.** By Chalmers G. Davidson, M.D., 151 pages. Price, \$2.75. Columbia, South Carolina: The Medical Association of South Carolina, 1950.

This biography of the first president of the Medical Association of South Carolina is obviously the work of a trained historian, and the officers of the society demonstrate their wisdom in supporting Dr. Davidson's work, rather than entrusting the task to the often uncritical, partisan amateur. It is a rather short work, yet it includes a great deal of background material which serves to bring Dr. Fayssoux to life against the tumultuous society of pre- and post-Revolutionary South Carolina.

Fayssoux was a native American of Huguenot ancestry, educated in medicine at Edinburgh, who practiced in Charleston from 1769 until his death in 1795, with time out for various military campaigns. He was active during that entire period in the general affairs of Charleston, and his activities earn him a place, though a minor one, in that company of gifted amateurs which marked the political and scientific life of the eighteenth century. He took part in the organization of cultural, political, and professional societies, and was human enough to be expelled from the first of these for not paying his dues. While at Edinburgh he became a friend of Benjamin Rush, and his correspondence with that distinguished physician is frequently referred to. In describing Dr. Fayssoux's activities, Dr. Davidson also presents a view of the evolution of South Carolina politics from allegiance to Britain, through admission to the original thirteen states, and settling down to being a part of the Union.

The scholarship of Dr. Davidson's work is at-

tested by his careful use of first sources, many of them consulted only by what must have been long searches. The numerous footnotes are silent witnesses to many hours of labor in old record rooms and courthouse cellars. The general style of the work strikes a happy balance between the straightforward recording of facts and excessive "fill-in" with undocumented material. It is recommended to anyone with an interest in eighteenth century American medicine or South Carolina, and to those addicted to Charleston.

**The American Illustrated Medical Dictionary.** By William Alexander Newman Dorland. Ed. 22. 1736 pages. Price, \$10. Philadelphia and London: W. B. Saunders Company, 1951.

The twenty-second edition of this standard medical dictionary marks its semi-centennial. This edition aptly fulfills the aims as set forth in the preface: "to give its users the most complete coverage possible of the fast growing medical vocabulary." In order to fulfill this aim, it has been necessary to include thousands of new terms and numerous new illustrations. The format leaves nothing to be desired, and the thumb index makes reference to it much easier. The twenty-second edition is really a must for the medical worker who tries to keep up with the ever increasing vocabulary that characterizes medical progress. Such a dictionary is needed on the desk or on the library shelf within easy reach of the doctor and his secretary.

## In Memoriam

FRANK LEONARD RAY, M.D.

1894 — 1951

Frank Leonard Ray died of a myocardial infarction in his office in Charlotte, North Carolina, April 23, 1951, at the age of fifty-six.

Dr. Ray was born in Wake County, North Carolina, on October 5, 1894. He received his B.S. degree from Wake Forest College and completed his first two years of medicine there. He received his medical degree from the Medical College of Virginia in 1919. His internship and residency were served at the Hospital of the Medical College of Virginia in Richmond, Virginia.

Dr. Ray began the general practice of medicine in Charlotte, North Carolina, in 1921. He was associated for many years with the late Dr. A. Wylie Moore. He practiced actively until 1948, when declining health restricted his practice to a few hours in his office each day.

Dr. Ray was a member of the Mecklenburg County Medical Society, the North Carolina Medical Society, the Southern Medical Society, and the American Medical Association. He was very active in and one time president of the staff of Saint Peter's Hospital, which joined with the Charlotte Sanatorium to become the Charlotte Memorial Hospital.

Dr. Ray was very interested in athletics. He served as the team physician of the Charlotte Hornets for many years. He was an avid fisherman and with a group of Charlotte business men established the Eagle Lake Fishing Club. He was a Shriner, a member of the Phi Rho Sigma fraternity, the Charlotte City Club, the Charlotte Country Club, and the Executives Club. He organized and was first president of the Charlotte Bridge Association. Dr. Ray was an active member of the Myers Park Methodist Church. He was one of the organizers of the Pyramid Life Insurance Company of Charlotte, North Carolina, and served as Medical Director of the company at the time of his death.

Dr. Ray is survived by his wife, the former Ethel Woods, and two daughters, Mrs. Philip Rea Taylor of Raleigh, North Carolina, and Miss Patsy Ray of the home.

Dr. Ray brought to his patients a quiet humanity, confidence, and security. He possessed the capacity for making friends that few men have had, for to see him once was to know him. His patients, friends, and associates were inspired by his gentle manner, geniality, and faith, which were unchanged by declining health. Those of us who were fortunate enough to know, serve, and be served by him will not soon forget his example of the true physician.

THEREFORE BE IT RESOLVED: (1) That we are grateful to Almighty God for his life and its influence on us; (2) That we extend to his family our most sincere sympathy; (3) That a copy of this resolution be sent to his family and to our State Journal.

Resolutions Committee,  
Mecklenburg County Medical Society

WILLIAM MOORE WILLIS, M.D.

1890 — 1951

On August 4, 1951, Dr. William Moore Willis of Farmville passed away after a prolonged illness.

Dr. Willis was born at Morehead City, February 4, 1890. He was educated in the Morehead City schools. He was graduated in 1913 from Wake Forest College and received his M.D. degree from the Medical College of Virginia in 1915. He interned at Grace Hospital in Richmond, and began the practice of medicine in Morehead City. In 1917 he located in Farmville, but after only one month was called into the service of his country, serving at Camp Jackson and Fort Oglethorpe until his discharge in 1918. He immediately resumed practice in Farmville and continued in active practice until forced to retire in 1941 because of ill health.

Dr. Willis enjoyed a large practice in and around Farmville. He was an active citizen of his community, a member of the Baptist Church, the Rotary Club, the Masonic Order. He was active in the Pitt County Medical and Dental Societies as long as his health permitted, attending its meetings regularly, and participating in its programs. He was a member of the North Carolina Medical Society and the American Medical Association.

In respect to the memory of our departed professional brother and friend, BE IT THEREFORE RESOLVED:

First, that the Pitt County Medical Dental Society express to the family of Dr. Willis its deepest sympathy in the loss of the father and husband.

Second, that the presence of Dr. Willis at the meetings of the Medical Society and Dental Society has been and will continue to be greatly missed.

Third, that the loss of a man of such ability, character, and integrity will be greatly missed by his community and by the county at large.

Fourth, that the memory of his example of faithful and devoted services in his chosen profession of medicine to people of all ranks and races will continue to be a stimulating guide to those of us who remain to carry on his work.

Fifth, that copies of these resolutions be mailed to the family, published in the local paper, and inserted in the minutes of the Pitt County Medical and Dental Societies.

Resolutions Committee  
FRED P. BROOKS  
THOMAS G. BASNIGHT  
JOHN M. MEWBORN



# NORTH CAROLINA MEDICAL JOURNAL

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## IATROGENIC DISEASES

WILLIAM M. NICHOLSON, M.D.

DURHAM

The subject of iatrogenic diseases is one that a physician approaches with profound searching of his records and of his soul. Such a search is a rewarding and sobering experience, and one that should be indulged in at frequent intervals. Many of these case records are amusing. In some cases it is found that an untoward effect has been produced which resulted in relief of the patient's complaints and illness. Too frequently, however, the new disease that has been created is more debilitating and devastating than the initial one for which the physician was consulted. Only by remembering and analyzing these problems is the physician able to reduce the incidence of the complications, or at least be prepared to handle them.

The word "iatrogenic" is derived from the two Greek words — *iatros*, physician; and *genesis*, origin, creation—hence, "created by the physician." The title of this discussion in its literal interpretation means, therefore, "the morbid state created by the physician."

### *Recent Changes in Medical Practices*

During the past few years the problems that confront medicine have changed tremendously. Not too long ago the hospital was an institution staffed by learned men, to which a patient was sent, never to return. A wake was held by his family and friends when he departed from home, and in most instances the wake was premature by only a few days. The diagnosis was not too difficult because the disease had progressed to the point that classic signs and symptoms were obvious to all. Certain groups of these signs and symptoms were labeled syndromes; frequently someone's name was prefixed—

occasionally a second and a third—so that the conditions ended up with such labels as Legg-Calve-Perthes Disease or Charcot-Marie-Tooth Disease.

With some thought and knowledge of the many and varied diseases, a satisfactory diagnosis could be given by the learned men who staffed the hospital. However, little could be done except to relieve the mental and physical suffering of the patient and his family. It was known and accepted that most patients recovered from acute illnesses, and those who did not, died. It was also recognized that some drugs, such as quinine and fox glove, helped the patient recover from his illness. And there were drugs such as the opiates that relieved the suffering until nature could come to the rescue and cure the patient. I might add that no doctor ever cured any patient.

The idea that there were only a few beneficial drugs gave rise to the school that has been labeled "nihilist." Osler and others were given this name, without justification. They did recognize the fact that often patients receiving no drugs recovered more promptly and with fewer complications than those who had been treated vigorously with many drugs and procedures that were then in vogue.

Blood-letting and purging undoubtedly brought about early death in many patients, as did the cold ice baths and the starvation diets in typhoid fever. Today we recognize that these forms of therapy still have a place in our armamentarium, but hardly the same as in the days of our fathers. Drugs in varying amounts were given to patients suffering with many diseases. Schools of homeopathy produced as many, if not more, iatrogenic diseases because of failure to utilize to the utmost the few drugs that were available, as did the allopaths, who gave too much

Read before the Section on the Practice of Medicine and Surgery, Medical Society of the State of North Carolina, Pinehurst, May 8, 1951.

From the Department of Medicine, Duke University School of Medicine and Duke Hospital, Durham, North Carolina.

of many drugs without knowledge of the after and side effects.

### *Etiologic Classification of Iatrogenic Diseases*

Iatrogenic diseases, therefore, can be classified as: (1) resulting from mistaken diagnosis, (2) resulting from attempts to establish a diagnosis, (3) resulting from medical therapy, (4) resulting from surgical therapy, (5) resulting from psychiatric therapy, and (6) resulting from the general care of the patient.

#### *Resulting from mistaken diagnosis*

As the number of therapeutic agents has increased, certain new problems in diagnosis have arisen. For instance, peripheral neuritis and intracapillary glomerulosclerosis were relatively infrequent complications of diabetes mellitus twenty years ago; today both complications are common. Generalized necrotizing arteriolitis was a rare disease, but with the use of sulfonamides this condition, while not common, is not rare.

Failure to arrive at the correct diagnosis, with resultant wrong treatment of the patient is responsible for the greatest number of iatrogenic diseases. Unfortunately, the percentage of correct diagnoses is still low.

A few years ago a patient was seen at Duke Hospital, complaining of recurring attacks of mid-abdominal pain, associated with nausea, vomiting, and diarrhea. Each attack lasted from three to four days, and was followed by overwhelming fatigue and weakness. The examination of the patient revealed little of significance. The blood pressure was 120 systolic, 70 diastolic. There was perhaps slight pigmentation of the skin, which was not characteristic of any disease. The laboratory studies, including the determination of serum sodium, chloride and potassium, were within normal limits. Because of the patient's marked weakness, it was suggested that potassium be given empirically. Following the administration of this drug the patient became desperately ill within a few hours. It was dramatically impressed upon us that he actually did have Addison's disease. Vigorous therapy with adrenal cortical extract and sodium chloride was instituted, following which he made a satisfactory recovery.

A patient recently came to Duke Hospital for relief of morphine addiction. Five years

previously she had had an attack of painless jaundice for which an exploratory laparotomy was performed. In the judgment of the surgeon, the patient had a carcinoma of the head of the pancreas. Morphine was administered in fairly large amounts for obvious reasons. The diagnosis was not correct and the patient is still living, but she has become addicted to morphine.

Obviously, many such instances can be cited, but these two will illustrate the point that extreme care must be exercised in the diagnosis of the patient's illness, since another disease may be substituted which may be more debilitating and serious than the original disease.

#### *Resulting from diagnostic procedures*

Diagnosis of an illness frequently calls for procedures that may endanger the patient, either directly or by the introduction of a new disease. For instance, in the second case cited above, several factors influenced the surgeon in deciding not to obtain tissue for biopsy—the condition of the patient during the operation, the location of the tumor mass, and so forth. In the surgeon's judgment, the patient's life would have been endangered had he done more at that particular time. Furthermore, he had, in his opinion, sufficient evidence to make a diagnosis of carcinoma.

The doctor's judgment is the final court of decision as to what diagnostic procedures are to be carried out. He is aware that administration of Priodax for visualization of the gallbladder may produce a severe reaction. The urologist knows that Diodrast may cause a fatal reaction, and he has learned not to use this substance in the presence of a history of severe allergic reactions. The dangers of perirenal insufflation for the purpose of demonstrating an adrenal tumor, and of the punch liver biopsy for aid in diagnosis of liver disease, are fully appreciated by the physician. In spite of these dangers, he is willing to subject his patient to these procedures because he believes that the importance of the answer he will obtain outweighs the danger involved.

These are dramatic instances, and the physician seriously considers the consequences before undertaking the procedures. But how many of us realize that a patient from whom a sample of blood has just been obtained for serologic studies or a routine blood count may soon be ill with homologous serum



jaundice, the causative agent of which was not destroyed in the sterilization of the needle or lancet used? Such an instance was recently seen in Duke Hospital. It is not implied that such diagnostic studies be omitted from our list, but to emphasize the importance of the knowledge and conception that danger is present in even a simple act such as blood letting.

#### *Resulting from medical therapy*

A young lady was admitted to Duke Hospital, desperately ill and needing blood. A call went out for donors, and a certain man's blood was selected. The patient improved, and during her convalescence the donor asked permission to meet the young lady who had received his blood. The couple eventually were married, and in due time the wife became pregnant. Her child died from erythroblastosis fetalis three days after delivery. Shortly thereafter she again became ill, and more transfusions of blood were given. With each transfusion she had a severe reaction, and finally she died. Postmortem examination revealed the findings that are now known to be characteristic of Rh sensitivity. The recipient was Rh negative; the husband, who was the donor, was Rh positive. The resulting sensitivity, with circulating anti-Rh factor, caused the death, not only of her child, but eventually her own death.

Everyone is acquainted with the toxic effects of the sulfonamides and the thiouracils, and the number of severe illnesses and deaths that have resulted. However, the beneficial results warrant the continued but cautious use of these substances. The systemic reactions to penicillin, and the local bowel and systemic reactions to terramycin, aureomycin and Chloromycetin are to be pointed out. Those reactions are known to the laity and are accepted as the chance that must be taken in treating or being treated by these drugs. I wonder, however, if we realize how much illness is produced and how many deaths are caused by less dramatic and more common substances such as water, table salt, and baking soda. The judicious use of these substances is necessary for the preservation of life. The injudicious use has caused, and will cause, unnecessary illness and in some instances death.

One drug that always comes in for its just share of criticism is bromide, and I must say that I endorse these criticisms. The effectiveness of the drug as a sedative, and its

availability to the patient makes it a frequent agent in producing illness. We are prone to believe that the incidence of bromidism has been reduced to a negligible quantity, but this is not true. Within the past two months I have seen 5 patients whose major difficulty was due to excessive accumulation of this substance in the body.

Today we have new "drugs"—and I use the word advisedly—in cortisone and ACTH (adrenocorticotrophic hormone). Truly no substance has contributed so much to our armamentarium of useful therapeutic agents or research tools. The permanent relief afforded in certain hypersensitivity states, the temporary relief in such disease as rheumatoid arthritis, and the regulatory mechanism in Addison's disease make it imperative that these substances be reverently called "miracle drugs." It is unfortunate that their improper administration in any patient, and their use at all in some patients, result in such complications as severe disturbance in water and electrolyte balance, the introduction of a new syndrome to the patient (Cushing's syndrome), the production of psychoses and of convulsions, and, in rare instances, death. Even with the newest and latest additions to our therapeutic agents, the goal of the perfect drug is yet to be reached.

#### *Resulting from surgical therapy*

Severe and permanent morbid states are seen as the result of surgical manipulations, and once again it is to be emphasized that the resulting deformities, physical or psychic, are not in direct proportion to the extent of the original procedure or the frequency of operations. The advantages and disadvantages of an operation must be evaluated by the surgeon and many times by the patient, the physician, and the surgeon. In the light of our present knowledge, no one will question the wisdom of amputating a gangrenous foot or leg, although it is known that physically and psychically the patient will be incapacitated. Likewise, little thought is given to the inconveniences and mental anguish caused by a colostomy when it is necessary to resect a carcinoma of the colon. These surgical procedures are necessary if the patient is to survive, and therefore are undertaken unhesitatingly. Such indications for surgery are not always so clear cut, and it is then that more thought and care should be exercised. For instance, should the bowel dysfunction produced by a vagotomy be sub-

stituted for the chance of relieving a patient with a peptic ulcer? No set rule can be made to govern all cases but the question must be decided for each patient, based on all available information.

#### *Resulting from psychiatric therapy*

It was stated above that no discussion of the psychic disturbances that are produced by the physician would be made. This restraint is based on two reasons. First, I do not believe that my knowledge of psychiatry qualifies me for such a critical review. By the same token, my belief is that few are so qualified to dig diligently and remorselessly into the dark and, in some instances, dirty crevices of the patient's personality. Quite frankly, I do not know what to do with these facts once they have been found. I am informed by a reliable authority that occasionally an over-zealous probing into the past of a neurotic individual may actually precipitate a psychosis. In the second place, although I am positive in my own mind that a psychoneurosis may be produced by the physician, this fact would be most difficult to prove.

Several thoughts that deal with the handling of the psychic aspect of the patient by his physician occur to me. One condition that I would like to mention is obesity. Regardless of why the scales are overloaded—that is, too much food or too little expenditure of energy—the fact remains that no one will become obese unless he eats too much. It is my belief that in most instances people eat too much because of emotional stress and strain. They become weak and nervous, and have learned that by further stretching their stomach they will find temporary relief. Upon consultation of a physician, a blood sugar determination is done, and on the basis of that one determination of 90 mg. per 100 cc. a diagnosis of hypoglycemia is made. Instead of explaining that the weakness and nervousness is a manifestation of a psychoneurosis and, above all, that care should be exercised to avoid overeating, the physician tells the patient that when he is weak he must eat something. So he eats and eats, gets weaker and more nervous, grows fatter and fatter, until the little boys taunt him with, "Fatty, fatty, two by four, can't get in the kitchen door."

#### *Resulting from general care*

We see many patients who say that they overheard a doctor and nurse talking out-

side the door about cancer. From that moment on the patient was convinced that his trouble was cancer, and many consultations and much money later he is still firm in his conviction. Incautious and thoughtless statements frequently are the trigger mechanism in bringing a dormant and inconsequential psychoneurosis into a full-blooming and malignant one.

#### *Summary*

An attempt has been made to present a concept of therapy. Perhaps the title was ill chosen and does not convey precisely what is meant. We have observed a tremendous change in the care of patients and in our attitude toward the patient, and I must say that it has been for the good.

Iatrogenic diseases, in the broad sense of the term, are produced daily by physicians—in some instances, through lack of knowledge, rarely through lack of diligence, and occasionally with intent, knowing that the disease produced is less serious than that from which the patient was suffering. So long as we weigh the beneficial results of any form of therapy against the harmful effects of that therapy and the primary disease from which the patient is suffering is sufficiently serious, we have nothing to keep us awake that night. In short, this concept and philosophy of therapy may be summarized by a line from a song from *The Mikado*, "To let the punishment fit the crime."

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If I believed all the things that patients told me about what physicians had told them, I would long since have lost faith in the members of my profession. Nevertheless, some of them must be true. One woman said that Dr. So-and-so took her blood pressure and looking at her in a horrified way exclaimed, "My God, madam, it's a wonder you are alive!" Needless to say, that woman left the physician and it took months to dispel the idea that she was at death's door. I know a nose and throat man who has the habit of taking his patient's blood pressure. If it is high, he tells them they have a dangerously high blood pressure. Now, hypertension is potentially dangerous, but we all know that most patients with it live happily for many years provided an anxiety neurosis does not develop. Life itself is dangerous, since one cannot live without dying. With patients having hypertension my rule is never to tell them what their pressure is. The next time it is taken, unless one tells them a lower reading, anxiety enters the picture. I tell them the pressure is not bad and that I alone am the one to worry about exactly how high it is. Most patients accept this and rarely again want to know the exact level.—Yater, W. M.: *Keeping Abreast of Medical Progress*, Pennsylvania Medical Journal 54:428 (May) 1951.



PRELIMINARY REPORT ON THE  
FOLLOW-UP OF PREFRONTAL  
LOBOTOMIES PERFORMED BY  
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In November, 1946, the Neurosurgical Department of the Duke University School of Medicine agreed to undertake prefrontal lobotomy for mental disease, provided that each case was surveyed by a board of psychiatrists who would state that the case was hopeless unless the operation was performed. The psychiatrists agreed to certain criteria of hopeless mental disease:

1. The symptomatology of the mental disease must be malignant, as in schizophrenia, dementia praecox, and long-standing severe obsessive-compulsive neuroses.
2. The patient must have been mentally ill for a period exceeding two years. This provision was to guard against improper and premature diagnosis of hopelessness.
3. Other forms of therapy—electric shock, deep shock insulin, and psychotherapy—must have been given a satisfactory therapeutic trial.

In August, 1949, a lobotomy program was instituted by our group at the State Hospitals at Raleigh and Butner, North Carolina. A number of State Hospital patients had previously been operated upon at the Duke Hospital, but adequate neurosurgical facilities were made available at the Butner State

Hospital, and patients could then be operated upon at no additional hospital cost.

*Operative Procedure*

In the first two years of our lobotomy program, an attempt was made to be as conservative as possible in order to avoid secondary post-lobotomy personality changes. Some operations were done anterior to the coronal suture, and not all quadrants were sectioned. By August 9, 1949, the procedure was standardized, so that now all lobotomies are performed at the coronal suture. Effort is made to avoid opening the ventricle except in cases showing ventricular dilation; all four quadrants are sectioned.

It seemed to us that failures were more apt to occur when insufficient sectioning was done than when a "standard" lobotomy at the coronal suture was performed. We are forced to admit, however, that we have an insufficient number of cases to prove this point. Numerous observers have pointed out that many modifications of the standard procedure have produced about the same results, and nobody seems to have accumulated a large enough series of various frontal lobe lesions to state with certainty that one type of operation is superior to another. All operations in this report were done by the Lyerly-Poppen open, superior technique, with extreme surgical caution in hemostasis and a minimal use of the cautery on the cortex.

*Mortality*

As of April 21, 1951, a total of 367 patients have been operated upon—155 at Duke Hospital and 212 at Butner Hospital. The surgical mortality rate has been .84 per cent for the 367 cases. One of these deaths was caused by the anesthetic, one was probably due to poor postoperative care, and the third was a surgical death, occurring after the first sectioning had failed to relieve psychogenic pain and a second operation had been performed three days later. A fourth patient, pre-operatively a severe epileptic, died in status epilepticus three months after operation. If this case is included, the mortality rate is 1.1 per cent. These figures are very favorable in comparison to the 2 per cent mortality rate reported in 1943 for the 618 cases collected from the American literature (Ziegler)<sup>(1)</sup>, and with the 3 per cent mortality rate of the English Board of Control's report of 1000 cases<sup>(2)</sup>. Freeman and Watts<sup>(4)</sup> report that, taking all together the

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10,000 operations in this country, the death rate is 3 per cent.

### *Selection of Cases for Operation*

This preliminary report is based on a study of 284 operations, 254 of which were for mental disease, and 30 for intractable pain in malignant physical disease. Follow-up reports varying from four months to forty-eight months following operation are available in all of these cases.

### *Types of cases*

The decision to operate was governed by several considerations. In the largest percentage of cases, the aim was to restore the patient to normality—to cure mental disease. Surgery was undertaken in a second group of patients because they constituted serious hospital problems—combativeness, destructiveness, serious nursing problems (soiling and bathing and feeding). A third group was selected for justifiable experimental reasons. Patients who were regarded as hopelessly deteriorated and whose prognosis was poor even with lobotomy (long-standing hebephrenic schizophrenics) were selected. A few cases were regarded as acute emergencies (death imminent; anorexia nervosa and violent fury; uncontrollable).

### *Chronicity of illness*

The type of cases in which operations were performed is interesting and important in evaluating the results of prefrontal lobotomy. As stated before, chronicity is, to our minds, the safest criterion of the hopelessness of an illness.

Table 1  
Duration of Illness

Duration (years)	No. Cases	Per Cent
1 to 2	16	6.3
3 to 4	36	14.0
5 to 10	112	93.7
11 to 16	44	
16 to 20	23	
21 or more	23	

It will be seen from table 1 that the number of patients operated upon within less than two years of illness is very small and that these operations were done only as emergencies, or when the diagnosis was quite certain and deterioration was advancing rapidly. As a group, we are very much opposed to early operation (after less than two years of illness), because we fear that enthusiasts for the lobotomy procedure are too likely to

conclude that a mental illness is malignant without giving time a chance to heal. In view of the very high percentage of cases which are diagnosed as schizophrenia in many clinics, the high percentage of recoveries reported from these groups, and the many psychiatrists recommending lobotomy procedures within the first year of illness, we feel that our conservatism is not ill founded. Obviously, if patients who would recover anyway, if given sufficient time, are operated on, the recovery rate will be greatly increased, but lobotomy opponents will be able easily to collect cases in which spontaneous recovery has taken place in spite of advice to operate. The conservatism of our group is illustrated by the fact that in the great majority of our cases the illness had lasted more than five years before operation (table 1).

### *Evaluation of Results*

#### *Criteria of improvement*

It is difficult to evaluate results without using several criteria of improvement. A questionnaire sent patients and families asked, "Do you regard the patient as better, the same, or worse than before operation?" The same question was asked the doctors, nurses, and attendants in regard to the patients remaining in the hospital. The answers for the group are summarized in table 2.

Table 2 Results in 254 Patients with Mental Disease (Based on Answers to Questionnaire)		
Results	No. Patients	Per Cent
Better	185	73
Same	61	24
Worse	5	2
Died	3	1

If one accepts the criteria of being able to live outside a hospital, the following facts emerge:

Previous to operation, 233 of the patients had been in psychiatric hospitals. Of these 254, 107 (42.3 per cent) are now out of the hospital; this out-of-hospital figure must be reduced to 33.9 per cent, however, because 8.4 per cent of the patients had never been in a mental hospital (table 3).

The Duke cases show a higher percentage of out-of-hospital patients than does the State Hospital group. Of the State Hospital patients, 26.8 per cent are out of the hospital. It must be recognized that making an out-of-hospital arrangement for patients who



Table 3  
Patients Discharged from Hospital

Classification	No. Patients	Per Cent
Total cases reported	254	100.0
Previously hospitalized	233	91.6
Not previously hospitalized	21	8.4
Living outside hospital postoperatively	107	42.3
Previously hospitalized patients living outside hospital postoperatively	86	33.9

have had an average hospital stay of seven years is often difficult.

Another criterion of improvement is whether in family and psychiatric opinion the patient can be regarded as well. Of our group, we have considered 28 patients (11 per cent) as completely recovered. We have not included patients that some observers might regard as well. For example, a 27 year old divorced wife, ill for four years, with a constant violent excitement that required constant isolation or ten attendants to avoid serious injury to other patients or attendants, has been out of the hospital over two years. She has satisfactorily completed a beauty-operator course, and is making a good social adjustment in spite of divorce and the remarriage of her husband. However, we do not regard her recovery as complete, because she is unable to hold a job for more than two months.

If the criterion of hospital management is used, the following facts emerge: In one group of State Hospital patients (168 cases) sixty-three (37.5 per cent) were destructive before operation. Following operation, only 13 or 7 per cent remained destructive.

The following case illustrates the improvement following operation, although by no stretch of the imagination can the patient be regarded as cured.

A 59 year old man with diagnosis of dementia praecox, who has been in the State Hospital twenty-five years, was so destructive that two seclusion rooms were required for his care. He destroyed alternate ones on alternate nights, after repair had been done during the day. It was estimated that his destructiveness cost the state several thousand dollars a year. He is now able to live comfortably and placidly in a county home and, for a time, was able to adjust to a boarding home. (He is without family or friends.)

Of the 168 State Hospital patients, 73 (43.4 per cent) were assaultive or combative. After lobotomy, the number of assaultive or combative cases was reduced to 17. That is to say, 77 per cent of the combative patients were peaceful following operation.

Table 4  
Diagnostic Classification of Cases

Diagnosis	No. Cases
Schizophrenia	
Simple	7
Paranoid	95
Catatonic	26
Hebephrenic	43
Total	171
Affective Disorders	
Manic	17
Depressive	19
Schizo-affective	19
Total	55
Others	
Obsessive-compulsive disorders	8
Post-encephalitic behavior disorders	4
Psychomotor epilepsy	1
Heller's disease	2
Drug addiction	3
Psychopathic personality	3
Anorexia nervosa	2
Mental deficiency with behavior disorder	5
	28
Total	254

#### Diagnostic analysis

As shown in table 4, 171 of our cases were diagnosed as schizophrenia. Of this group, 64.9 per cent of the patients were regarded as improved, 6.4 per cent as recovered, 58.5 per cent as better, 33.3 per cent as the same, and 1.8 per cent as worse.

There were 55 cases of affective disorders (chronic depressive, manics, or schizo-affective). Of these patients 29 per cent were recovered after the operation, 49 per cent were better, 20 per cent were the same, and 2 per cent were worse. It should again be pointed out that these cases were chronic. Only 2 cases were under four years duration, and the remainder ranged from five to twenty-four years in duration.

The results in the schizophrenic group are classified in table 5.

Table 5  
Results in 171 Cases of Schizophrenia

Type	Catatonic	Hebephrenic	Paranoid	Simple	Per Cent
No. Cases	26	43	95	7	
Results					
Recovered	4	1	5	1	6.4
Better	16 (61%)	20 (46%)	61 (64%)	3	58.5
Same	5	21	28	3	33.3
Worse	1	1	1	0	1.8

It has been suggested that the catatonic and paranoid patients fare somewhat better than hebephrenic. However, the diagnosis in these categories is always doubtful. Whether the case is classified as paranoid, catatonic,

or hebephrenic is often determined by when in the course of the illness the diagnosis is made, or by whether the observer is struck more by one than another feature of the case. It is important to note that out of 45 patients who were regarded as deteriorated before operation, 13, or one-third, are now out of the hospital.

These results in schizophrenia are in accord with those of other observers. Freeman and Watts<sup>(4)</sup> report only 33 per cent of the patients out of the hospital, but another 33 per cent are showing fair improvement. The Board of Control (England) reports that of their total series of 1000 cases, 24.8 per cent of the patients recovered, another 42.8 per cent improved, and 24 per cent remained unchanged<sup>(2)</sup>. The English figures are to be viewed with some skepticism, because of the large number of patients operated on within the first two years of illness (20 per cent) who had been ill less than two years. Their results in the schizophrenic group show 23 per cent discharged from hospital, 16 per cent recovered, and 63 per cent improved. This is contrasted with the English figures for the manic-depressive cases, in which the discharge rate in 250 cases was 50 per cent (note again early operation).

Our results for the predominantly chronic affective disorders are shown in table 6.

Table 6  
Results in Chronic-Depressive and  
Schizo-Affective Disorders  
(55 Cases)

Results	Per Cent
Recovered .....	29
Better .....	49
No change .....	20
Worse .....	2

It should be noted that a lower improvement rate in the affective cases than in the schizophrenic cases is due to the very much higher recovery rate.

Special types of cases require mention—Of 8 cases of obsessive-compulsive neuroses, 2 patients are completely recovered and 6 are much improved. Of the 3 drug addicts, one remains the same, the second is better, and one is well two years later. This case is worthy of note: A woman of 50 had been a morphine addict for twenty-five years and had innumerable hospitalizations for reduction in dosage. She was a licensed drug addict. Since operation, she has had no drugs of any sort for over two years—not even antihistamines for an allergic nasal condi-

tion. She appears to be cured after twenty-five years of morphinism.

Two children with a diagnosis of childhood schizophrenia or Heller's Disease have been operated upon, and both are improved. Slight but insignificant improvement has been noted in three children with post-encephalitic behavior disturbances. One 12 year old boy showing obsessive-compulsive symptoms and violence toward parents and instructors, had been unable to attend school for five years and seemed destined for institutional care. He is now well enough to return to school, make very high grades, and socialize with other boys. One of two patients with anorexia nervosa was markedly improved, gaining nearly 100 pounds in weight and becoming active after many years in bed. The other patient died post-operatively. Three mentally deficient patients presenting behavior problems were improved by operation.

We have seen active aggressive homosexuality replaced by heterosexual interest in one case. Another patient who was a "peeping Tom" and had served a long penitentiary sentence for theft also, was operated upon after he had been arrested and violated his parole by further "peeping." He was freed of his "peeping" impulses and returned to his career as a successful salesman.

#### *Undesirable Effects*

The occurrence of convulsions either post-operatively or later is a matter of concern to both the patients and the physicians. In this series of 254 cases, 16 patients had seizures. Six of these were postoperative, recurring immediately or within one month of operation; 4 patients had seizures within three months, and 5 patients had seizures after three months. Our postoperative seizure rate is 6.4 per cent. This is higher than that of the English series—3.3 per cent—lower than that reported by Greenblatt, Arnot, Poppen and Chapman—10 per cent<sup>(3)</sup>.

A frequent fear of relatives is that the patient will be left so lethargic after the operation that he will be nothing more than a vegetable. In our cases, a significant percentage of our patients have shown increased lethargy and loss of initiative. Of those patients remaining in hospitals, 50 per cent are somewhat inactive. They will respond to directions and work or perform such personal operations as bathing and combing the hair, if directed. Of course, many were in-



active before operation. It might be fair to estimate that initiative and activity are reduced in 35 to 50 per cent of the unimproved or only moderately improved patients.

We have found urinary incontinence only temporary in all but one case out of the 254.

We have seen only one case in which there was abnormal sexuality after operation. This man stopped his alcoholism but exposed himself to little girls.

#### *Report of 30 Cases of Intractable Pain*

Before summarizing our results in the series of mental disorders, a report should be given on the effect of prefrontal lobotomy in 30 cases of intractable pain, usually requiring large doses of narcotics which only partly relieved the suffering. Twenty-two of the operations can be regarded as successful. Eight were failures.

Table 7  
Results in 22 Cases of Intractable Pain

Diagnosis	No. Patients	Results
Thalamic syndrome with drug addiction	4	2 patients relieved; 2 continued to use drugs
Trigeminal neuralgia with paranoia	1	No relief (Family reports they would repeat operation)
Malignant tumors with drug addiction	20	18 patients relieved; 1 remained stuporous until death; 1 not relieved
Intractable asthma	1	Pain relieved for six weeks; patient died in an asthmatic attack 17 months later
Psychic pain with Demerol addiction	1	No relief; patient died during second lobotomy resectioning 2 days later
Tabes with drug addiction	1	Marked relief of pain
Shoulder-hand syndrome and Demerol addiction	1	Relief of pain; bad personality change; postoperative hemorrhage (?)

One of these cases with a thalamic syndrome illustrates a very important reservation which must be made in evaluating lobotomies. A 50 year old man was operated on, resulting in the relief of the thalamic pain. For one year his behavior showed such deterioration that it was thought he would have to be committed to a state hospital. His symptoms then disappeared, and he has been well for two years. The opposite has also occurred. Relapses do occur after several months of apparent recovery. Conversely, some of our mental patients have shown surprising permanent improvement after one to two years. These cases cannot be regarded as

spontaneous recoveries because of the very long duration of the illnesses.

#### *Summary*

Our results in the first follow-up on 254 cases of mental illness can be summarized as follows:

1. The complete recovery rate for all cases is 11 per cent.

2. The complete recovery rate in schizophrenia is 6.4 per cent.

3. Sufficient recovery to live outside of a hospital was achieved by 33.9 per cent of the patients. (Another 8 per cent were able to continue to live outside of hospital.)

4. The improvement rate in schizophrenia is about 64 per cent.

5. The improvement rate in chronic affective states is 78 per cent.

6. Hospital management is markedly facilitated by lobotomy. Seclusion can be abolished in 70 to 80 per cent of the cases, and combative and assaultive behavior abolished in 70 per cent of the cases; destructive cases can be abolished in 80 per cent of the cases.

7. Chronic obsessive cases can be markedly relieved.

8. Intractable pain can be relieved in a large percentage of cases (70 per cent) and narcotic drugs abolished in cases of malignant physical diseases.

#### *Conclusion*

The literature on lobotomy results has been admirably summarized by Milton Greenblatt<sup>(3)</sup>, and there is no need to repeat it here.

Freeman and Watts<sup>(4)</sup> sum up the results of prefrontal lobotomy as follows: "Taking all reports together, it would appear that good results are obtained in about one third of the cases, fair results in another third, while the final third do not respond to the treatment." We believe that our results closely parallel this experience. Discharge from hospitals seems the best simple criterion for results classified as good. To this must be added the enormous benefit to state hospitals which are already crowded and understaffed by the striking reduction in the combativeness and destructiveness of patients remaining in hospitals.

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3. Greenblatt, M., Arnot, R., Solomon, H. C.: *Studies in Lobotomy*. New York, Grune and Stratton, Inc., 1950.
4. Freeman, W. and Watts, J. W.: *Psychosurgery* 2. Springfield, Ill., Charles C. Thomas, 1950.

### *Abstract of Discussion*

**Dr. Eben Alexander, Jr.** (Winston-Salem): This report by Dr. Hohman and his associates represents, to my mind, the ideal selection of cases for prefrontal lobotomy. As in any radical approach to a neurosurgical problem of this sort, from ruptured discs to brain tumors, the basic importance of the operative technique is taken for granted. The real problem lies in the selection of cases. I cannot, therefore, too enthusiastically endorse the strict criteria this group has used in selecting cases for lobotomy.

I believe they feel, as I do, that with respect to this procedure, which, once done, cannot be revoked, one would prefer to commit many sins of omission rather than any sins of commission. In other words, we would prefer to withhold the operation in certain doubtful cases which might be benefited, rather than operate needlessly in certain cases without adequate indication.

We all know of lobotomies which have been done for relatively mild neuroses—vague, painful conditions and the like—which have given the procedure a rather bad name. This and similar reports represent a genuine attempt to establish prefrontal lobotomy on a scientific basis, in its rightful place as a useful tool in the hands of the psychiatrist.

This procedure may be only a temporary expedient—a valuable and constructive one, to be sure—in the therapy of mental disorders. It may be that chemical and hormonal therapy will, in time, bring greater improvement in the treatment of mental disease than this form of therapy.

Whatever future developments may be, however, prefrontal lobotomy has become established in the treatment of certain mental diseases, both from the point of view of the individual patient, and the point of view of the socio-economic structure. I venture that many state institutions would be persuaded by such convincing figures as these to adopt the procedure for economic reasons alone. I believe the English, in many places, have taken that for granted, feeling that by taking certain patients out of back wards and putting them in front wards, they could save the state a great deal of money.

As Dr. Hohman has indicated, the various techniques used in performing lobotomies have brought approximately the same results.

While we have not performed any large number of lobotomies in Winston-Salem, for some time we have used the modification of the Lyster-Poppen technique, using the McKenzie leukotome which severs about the same number of fibers in the frontal lobes through a very small cortical wound. We believe that this reduces the number of cases subsequently developing epilepsy, without increasing the incidence of postoperative complications.

**Management of the Epileptic**—It has long been recognized by experienced clinicians, and, more recently, has been shown by electroencephalographic studies that attacks are more apt to occur when the mind is vacant than when it is busy. Mental concentration therefore is good, not bad, for the epileptic, and his education should proceed normally. In view of his handicap it is even more important for him than for the ordinary person to advance his knowledge.—Sir Charles Symonds: *Management of the Epileptic*, Brit. M.J. 2: 1047 (Nov. 4) 1950.

## PSYCHOSOMATIC MEDICINE

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Before any understanding of the subject is gained or even an intelligent discussion of psychosomatic medicine can be carried out, the dualistic thinking involved in the dichotomy of mind and body must be discarded. The idea that mind and body are separate entities, comparable to two trains running synchronously along separate tracks with no connection between, after the fashion of the parallelism of Descartes, is untenable to anyone who has made even a superficial study of this subject.

This is especially true when we deal with the emotions, which play the most important role in psychosomatic medicine. When we use such words as fear, hostility, anxiety, sadness, and depression, we are merely expressing symbolically feeling tones experienced by the body. Certainly infants and animals experience emotions without having the symbolic expression of language to designate them. With the development of newer scientific methods of investigation, we are learning that definite changes take place in the intra- and extra-cellular structures of the body when an emotion is experienced. It might be that in the future we can designate fear as, for instance, so many milligrams of circulating epinephrine, certain measurable changes in the other endocrine secretions, changes in the diameter of the blood vessels, or the like. In the present light of scientific research both in psychology and in medicine, the dualistic concept of mind and body is gradually being replaced by the more accurate monistic approach. For lack of a better term, "psychosomatic medicine" is employed; "somatopsychic medicine" might serve equally well.

### *Etiologic Factors in Disease*

In the etiologic study of disease, at least four factors must be considered. Stanley Cobb has designated these as genogenic, histogenic, chemogenic, and psychogenic<sup>(1)</sup>. Examples of almost exclusively hereditary or genogenic diseases are hemophilia, certain of the familial neurologic diseases, and the like. Hippocrates noted a connection between temperament and the body in his choleric, melan-

<sup>1</sup> Read before Buncombe County Medical Society, September 18, 1950.



cholic, and sanguine types. In modern times, these observations have been studied more scientifically by Kretschmer and Shelton.

Histogenic or cellular diseases are exemplified by tumors and the infections. Chemogenic diseases might be thought of as those produced by chemical poisoning, such as carbon monoxide and bichloride of mercury. Among the almost purely psychogenic diseases may be listed syncope, acute "air raid" ulcers, and certain hysterical phenomena. It should be emphasized that all the aforementioned factors play a part, to a varying degree, in the production of disease. In psychosomatic diseases it is thought that psychogenic factors play a prominent part, but not necessarily the whole etiologic role.

#### *Development of the Concept of Psychosomatic Medicine*

Psychosomatic medicine is defined by Stanley Cobb as a "clinical field involving the study of abnormal functions set going by emotional stimulation of any system in the body and the study of lesions caused by abnormal functions."<sup>(2)</sup> With the exception of the observations by the ancients, such as Plato and Hippocrates, very little scientific evidence of psychogenic disease was observed until modern times. Hunter's remark that his life was in the hands of any fool who cared to make him angry is classical. Graves noted among soldiers under prolonged stress the development of the disease which now bears his name. In the field of psychology and psychiatry, the names of Freud and Meyer stand out prominently. Freud, in his neurologic studies, and especially in his unraveling of the mysteries of hysteria and the unconscious, made many profound observations concerning the effect of emotional stress upon the body. Meyer's psychobiologic approach to the study of disease bore much scientific fruit. In 1907 Kreibich produced a blister by hypnosis<sup>(3)</sup>, a feat which has been repeated since by other investigators. In 1915 Cannon published a monumental work entitled *Bodily Changes in Pain, Fear, Hunger and Rage*<sup>(4)</sup>. His studies on the autonomic nervous system, especially those on the sympathetic system and the hypothalamus, did much to close the gap between the former concepts of mind and body. Wolf had the remarkable opportunity of watching the genesis of peptic ulcer in man<sup>(5)</sup>. He observed directly the effects of emotion upon the gastric

mucosa through a surgical wound in a man whose esophagus had been obliterated.

A partial list of modern psychosomatists includes the names of Cobb, Dunbar, Weiss, English, van Ophuijsen, French, Alexander, Selye, Long, Sawyer, Thorn, and others. What Cannon contributed in his studies on the autonomic nervous system is paralleled by Selye<sup>(6)</sup> and others, in the field of endocrinology in their studies of the pituitary adrenal system and its effect upon diseases—designated by Selye as "diseases of adaptation."

Among the diseases which are probably influenced by the emotions are:

*Gastrointestinal system:* gastric ulcer, cardiospasm, anorexia nervosa, nausea and vomiting (including the nausea and vomiting of pregnancy), bulimia, diarrhea, spastic colitis, mucous colitis.

*Respiratory system:* bronchial asthma.

*Cardiovascular system:* Irregularities in the action of the heart (tachycardia and arrhythmia), essential hypertension, angina pectoris (coronary occlusion), headache (migraine), allergy, Buerger's and Raynaud's diseases.

*Skin:* Neurodermatitis, allergy, disturbances of function (sweating, etc.).

*Metabolic and endocrine systems:* Hyperthyroidism, diabetes, so-called "menopausal syndrome," menstrual disturbances (dysmenorrhea, amenorrhea, menorrhagia, etc.).

*Genitourinary system:* Vaginismus and dysparunia, ureteral spasm, sphincter disturbances, impotence and frigidity.

*Skeletomuscular system:* Rheumatoid arthritis, fractures ("accident proness"), bursitis, torticollis.

*Nervous system:* Convulsive disorders, multiple sclerosis, disturbances of the vegetative nervous system.

*Eye, ears, nose and throat:* Glaucoma, photophobia, tinnitus, sinusitis.

#### *The Effects of Repression*

According to Alexander, "Psychosomatic research deals with processes in which certain links in the causal chain lend themselves at the present state of our knowledge more readily to a study by psychological than physiological methods, since the detailed investigation of emotions as brain processes is not far enough advanced."<sup>(7)</sup> Figure 1, which is a very rough diagrammatic representation, illustrates the fate of an impulse when unacceptable primitive drives attempt to reach consciousness, and repressive

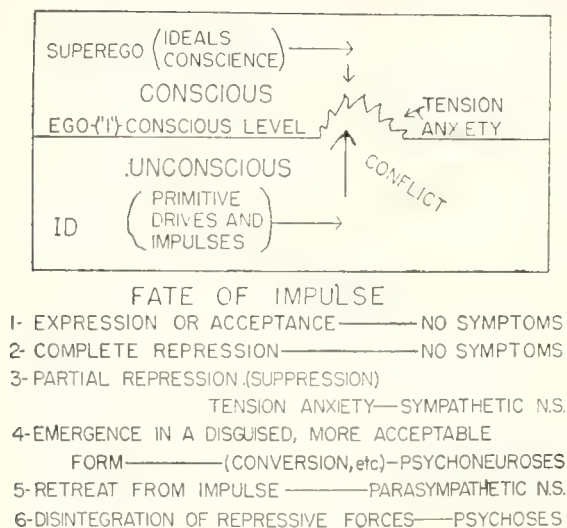


Figure 1.

forces are brought about by the super-ego, or conscience. If these drives persist, a subjective feeling of tension or anxiety ensues. If the impulse is expressed and accepted, usually no symptoms result. If there is complete repression of the impulse, usually no symptoms result. However, if it is only partially repressed or suppressed, the tension and anxiety previously described, occurs and, if sustained, produce changes in the body, probably largely by way of the sympathetic nervous system. If the impulse emerges in a disguised form or one more acceptable to the conscience, then such neuroses as conversion hysteria and the like ensue. If the individual (for lack of a better term) *retreats* from the impulse or unconsciously ignores certain stress situations, the parasympathetic nervous system is apparently stimulated, and symptoms resulting from its relative overactivity follow. If there is a complete disintegration of the repressive forces, then, of course, psychoses result.

The physiologic functions or responses of the body affected by psychologic influences are roughly three in number. The first response is voluntary. A person is hungry, he voluntarily walks toward food, and reaches out his hand for it. A second response by way of expressive innervations is exemplified by crying and laughing, as a result of stimulation of the nerves to the eye and facial muscles. A third method of response is by way of the vegetative nervous system—for instance, the increase in the blood pressure in response to fear. Long sustained

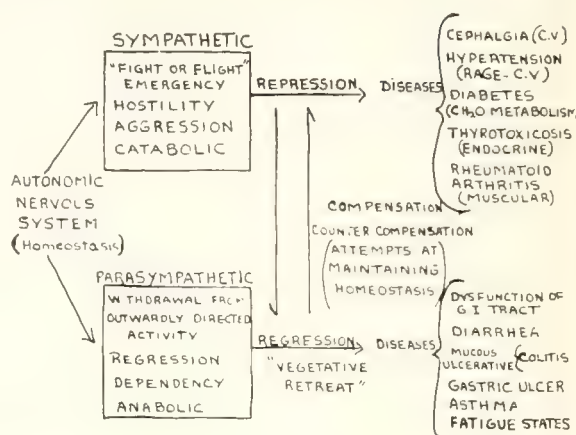


Figure 2.

vegetative responses, due either to conscious or unconscious emotions, seem productive to disease.

### *Response of the Autonomic Nervous System*

Figure 2 graphically, if not too accurately, summarizes the psychophysiologic response of the autonomic nervous system, whose normal function is to maintain homeostasis within the body. Hostile or aggressive tendencies stimulate the sympathetic nervous system, setting off what Cannon describes as the "fight or flight emergency mechanism," which is largely catabolic in nature. If these tendencies are not expressed, but are rather suppressed or partially repressed over long periods of time, such diseases as cephalalgia, hypertension, diabetes, thyrotoxicosis, and probably rheumatoid arthritis may follow. On the other hand, if there seems to be a withdrawal from outwardly directed activity—or, expressed otherwise, a psychologic regression—which tends to occur in dependent people, the parasympathetic system, which is largely anabolic in function, takes over. If this regression or "vegetative retreat" is continued over a long period, such diseases as dysfunction of the gastrointestinal tract, gastric ulcer, diarrhea, mucous and ulcerative colitis, asthma, and fatigue states may result. It must not be overlooked that compensation and counter-compensation interreactions between the sympathetic and parasympathetic nervous system occur in an attempt at maintaining homeostasis, and the end result is not exclusively a picture of overactivity of either one of these systems.



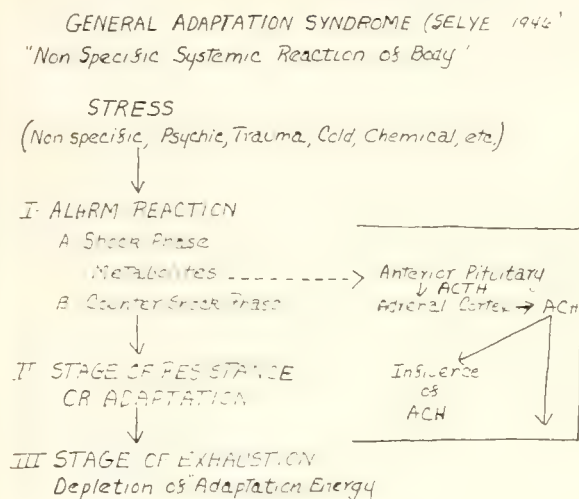


Figure 3.

I have in mind a patient who probably has both psychosomatic hypertension and mucous colitis.

#### The "General Adaptation Syndrome"

Until recently we have stated schematically the production of psychosomatic disease as follows: problem situation ———> disturbed emotional state ———> production of factor X ———> reaction of factor X on the most inadequate organ system ———> psychosomatic disease (Greenhill<sup>(8)</sup>). With the monumental work of Selye and his concept of the "general adaptation syndrome" (1946) factor X is becoming less of an unknown quantity.

By animal experimentation and correlation in human physiology, Selye, Thorn<sup>(9)</sup> and others have demonstrated a nonspecific systemic reaction of the body. His general adaptation syndrome is again simplified and graphically represented in figure 3. According to Selye's observation, the body reacts to stress, whatever its nature—whether psychic, traumatic, cold, chemical, or bacterial—in a certain pattern. He divides this into three stages—the alarm reaction, the stage of resistance or adaptation, and the stage of exhaustion or depletion.

The first phase or alarm reaction is divided into the shock and the counter-shock phases. Under the influence of catabolic metabolites, the body reacts with tachycardia, decrease in temperature, decrease in muscle tone, gastric and intestinal ulcers, edema, hemoconcentration, anuria, hypochlorhydria, leukopenia followed by leukocytosis, hyperglycemia soon followed by hypoglycemia,

and the liberation of epinephrine from the adrenal medulla.

Stimulation of the pituitary adrenal system by the metabolites in the shock phase initiates the counter-shock phase, wherein occurs a reversal of the changes in the shock phase, with an increase in the size of the adrenal cortex and a decrease in size of the thymus and lymphatic structures. This is soon followed by the stage of resistance or adaptation which is largely under the influence of the adreno-cortical hormone. This is not a static state, and if the altered homeostasis is continued, the diseases of adaptation ensue. If the stress is overwhelming or continued, then the stage of exhaustion, with a depletion of what Selye calls "adaptation energy," follows. There is then a recurrence of the alarm reaction, and death occurs.

Surgical shock is an example of the alarm reaction. The acute ulcers seen in air raids (the so-called "air raid ulcers") are a manifestation of the alarm reaction. Under prolonged stress Selye has produced such diseases as hypertension, periarteritis nodosa, nephrosclerosis, myocardial lesions, rheumatic diseases, and others. By such scientific methods as ablation and substitution therapy along the pituitary adrenal chain, he has demonstrated the function and the importance of ACTH and ACH in the production and treatment of the diseases of adaptation.

#### The Effects of Stress

The probable chain of events is illustrated graphically in figure 4, which is a summary of Selye's observation as well as those added by Long<sup>(10)</sup>, Sawyer<sup>(11)</sup> and others. Stress, either specific or nonspecific, seems to influence the hypothalamus. It, in turn, stimulates the sympathetic nervous system with the secretion of epinephrine from the adrenal medulla, which acts on the anterior pituitary. There seems to be a more direct pathway, known as the humoral or portal system, between the hypothalamus and anterior pituitary gland, which is not necessarily dependent upon neural or vascular connections between the two structures. The effect of the hypothalamus upon the anterior pituitary gland has been demonstrated after ablation of the latter and intraocular and intrasplenic implantation of its tissue in experimental animals (rats)<sup>(12)</sup>. Thus, under the influence of stress the anterior pituitary is stimulated to secrete ACTH as well as other

PROBABLE "CHAIN OF EVENTS"  
IN ADAPTATION

Selye modified by Long, Sawyer, et al 1947-48

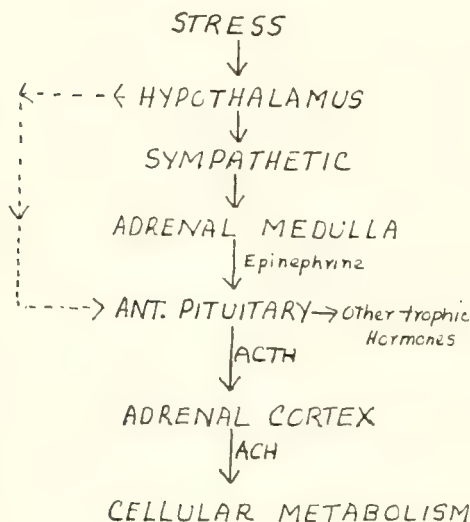


Figure 4.

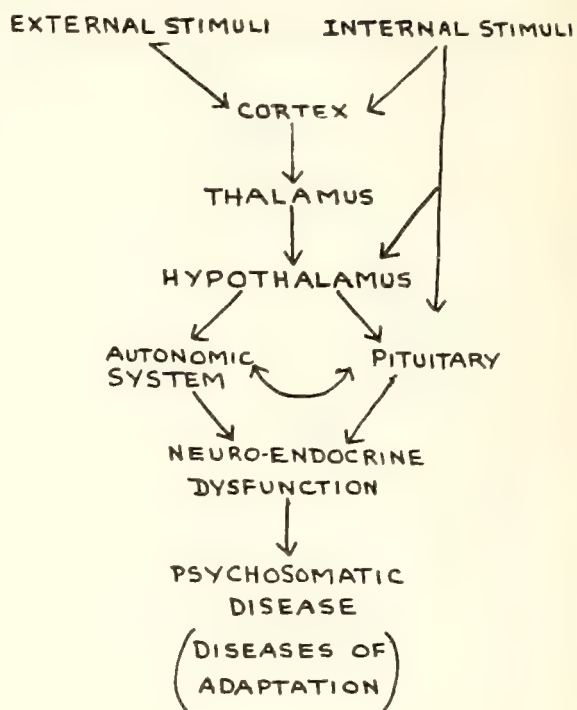


Figure 5.

trophic hormones. ACTH stimulates the adrenal cortex to produce adreno-cortical hormones, which react at a cellular level on cellular metabolism. The exact mechanism, especially in the production of diseases, is not known. Selye postulates that under continued stress mineralo-steroids are secreted in excessive amounts rather than the glucosteroids which bring about beneficial results.

#### *The Production of Psychosomatic Disease*

Figure 5 is an extremely simplified summary of the present theories concerning the production of psychosomatic diseases. Either external or internal stimuli or both might react, by way of the cortex or lower centers, upon the hypothalamus, which, in turn, stimulates the autonomic and pituitary adrenal system. Through their interreaction, followed by certain neuro-endocrine dysfunctions, psychosomatic diseases—or, if you prefer, Selye's "diseases of adaptation"—are produced.

#### *Summary and Conclusion*

A brief history of the development and present day concept of psychosomatic medicine, and a brief summary of the fairly well established pathologic mechanisms have been presented.

It might be said that life itself is a con-

stant state of adaptation to the external and internal environment of the organism. Besides the chemical, cellular, and hereditary factors, emotional stresses are considered important in the production of disease. With the advent of the newer specific drugs, more and more people will die of the so-called diseases of adaptation, which, it is estimated, already account for about 50 per cent of deaths.

The treatment and prevention of these diseases is becoming one of the foremost problems in modern medicine. An understanding of emotional factors and their neuro-endocrinologic pathologic effects is a necessary part of the training and armamentarium of the modern physician. The holistic approach to the study and treatment of diseases cannot be overemphasized. Today, as over two thousand years ago, the observation made by Plato still holds true: "For this is the great error of our day in the treatment of the human body, that the physician separates the soul from the body." (Dialogues, 380 B. C.).

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## PEDIATRICS IN GENERAL PRACTICE

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General practitioners, along with pediatricians and public health workers, are taking full advantage of improvements in research, teaching, drugs and antibiotics, and are cooperating with the allied general nursing and public health professions to reduce and eradicate many former killers. Infant mortality has dropped from 76 deaths under one year of age per thousand live births in 1921, to 32 per thousand in 1947. In 1900 the death rate among preschool children was 20 deaths per thousand population; by 1945, this figure had dropped to one death per thousand population. Also, maternal deaths have dropped 74 per cent within the past three decades.

Today, however, there are sections of the country where infant mortality is above the national average of a generation ago, and in some of the rural sections the very diseases that modern science is best able to prevent take a high death toll. It is estimated that 13,000,000 children, or one-third of the total child population of the country, live in these isolated rural areas where the preschool child receives about one-fourth as much health supervision as the child in the urban center. In the twelve largest metropolitan centers of the United States there are six physicians for every thousand children, whereas in isolated rural counties there is only one physician per thousand children;

and, of course, this one physician is a general practitioner. Moreover, despite the fact that more than all his time could well be devoted to adults, at least one-third of the general practitioner's daily work is in pediatrics<sup>(1)</sup>.

The American Academy of Pediatrics and the American Academy of General Practice should join their efforts and use every means available to abolish the serious gap in the distribution of medical care in rural areas as contrasted to that at urban centers. About one-half of the pediatricians perform minor operations on their own patients, about 20 per cent set fractures, and about 10 per cent do tonsillectomies. This being true, the pediatrician should have no fear of an inadequate volume of pediatric practice in rural areas.

One of the most notable conclusions of the Report of the Committee for Improvement of Child Health of the American Academy of Pediatrics was:

"The need for more physicians who are well-trained in medical care and health supervision of children. This need can be met only by strengthened pediatric education in medical schools and hospitals for undergraduates and graduates, for general practitioners, and specialists; and, by bringing the benefit of this teaching to the child, wherever he is."<sup>(2)</sup>

### *Rh Factor*

The several forms of erythroblastosis fetalis are more commonly grouped under the single term "hemolytic disease of the newborn." Some of these infants are markedly anemic and die within twenty-four hours after birth. Erythroblastosis occurs about once in every 200 deliveries<sup>(3)</sup>. Every pregnant woman should be tested for the Rh factor, and if she is Rh-negative, her husband should be checked also. If one mate is Rh-negative and the other Rh-positive, the patient's serum should be re-checked for antibodies at about the thirtieth and thirty-fourth weeks of pregnancy, and appropriate advice regarding the possibility of an erythroblastic infant should be given the potential parents.

It is the physician's responsibility, at the time of birth, to determine whether or not the infant has erythroblastosis. He can do this by examining the blood from the umbilical vein. The general practitioner should not consider these cases lightly. If adequate hospital or clinical facilities are not near at hand, he should refer a pregnant mother and her unborn child to a colleague who can ren-

<sup>1</sup>Read before the Southern Pediatric Seminar, Saluda, North Carolina, July 17, 1950.

der proper, adequate, and appropriate treatment during the last trimester of pregnancy.

### *Allergic Manifestations*

The physician is never more considered as an angel of mercy than when he quiets the midnight cries of a colicky little infant. A careful perusal of the family history will often lead to the diagnosis. "An infant born to allergic parents is an excellent candidate for allergy in its earliest form—namely colic."<sup>(4)</sup> An examination of the colicky infant may reveal such associated signs and symptoms as nasal blockage or discharge, rattling sounds in the throat, excessive slobbering or vomiting, sleeplessness and restlessness, thumb-sucking, nasal rubbing, anxious expression, and abdominal distention, excessive gas, mucus in the stools, hypersensitiveness associated with a rash about the face and neck, and perhaps constipation or diarrhea. It is of little benefit to give a diagnosis of gastrointestinal allergy, however, if the baby's symptoms persist and his screams never cease. Here, perhaps more than anywhere else, diagnosis is secondary and symptomatic treatment paramount.

The general practitioner should be familiar with the feeding habits of the baby. If it is breast-fed, he should suspect that some specific food in the mother's diet is the offending allergen and recommend that it be avoided. Mother's milk, *per se*, rarely causes colic or hypersensitivity. On the other hand, cow's milk is a frequent offender. In bottle-fed, colicky babies, the physician must ascertain whether or not the flow of milk is too slow or too rapid, whether improvement follows a change in the carbohydrate content of the diet, and whether or not an atmosphere of calm prevails around the infant. If careful attention to these factors has been to no avail, it is perhaps wise to try denatured cows' milk (such as Similac), a formula of low milk fat content, or a change in the protein content by the use of a vegetable milk such as Mull-Soy. It may even be necessary in a few instances to avoid all milk formulas entirely.

While attempting to find the formula to fit the child, the general practitioner should also take advantage of the antispasmodics and sedatives along with the old-fashioned use of hot water bottles. Small portions of warm soda bicarbonate water given orally, or as an enema with the application of turpentine stupes, and, where propriety does not

prohibit, a few drops of warm whiskey may sometimes prove helpful. If the baby fails to respond to any of these measures in the armamentarium of folklore and general practice, and the colicky symptoms fail to abate, it is a good policy to refer the patient to the pediatrician whom one most dislikes.

### *Prematurity*

Prematurity still tops the list as the cause of death in the pediatric age group and constitutes a major challenge in the field of preventive medicine. North Carolina can boast about many of its health achievements, but when we review the vital statistics from the State Board of Health in infant mortality, the picture takes on a gloomy hue. This truly is a phase of medicine in which the obstetrician, pediatrician, and general practitioner should work closely and harmoniously together toward the common goal of fewer stillbirths and a reduced infant mortality.

### *Immunization and Childhood Diseases*

In the field of infectious and contagious diseases, commonly spoken of as "the usual childhood diseases," whooping cough remains one of the most common and most dangerous. It kills about 25 per cent of its victims under 1 year of age, and has shown a definite increase within the past few years. This clearly indicates that the general public and physicians alike are becoming careless regarding their public health responsibilities to children. Neither organized medicine nor public health services can prevent deaths due to negligence. The general practitioner should devote his time and energies to such commonplace diseases as whooping cough, diphtheria, scarlet fever, and measles. These diseases are all killers, and could be eradicated completely if every general practitioner made a determined effort to see that every child in his clientele had proper and adequate immunization. Intelligent parents are as anxious as public health authorities to have their children actively immunized against the common infections. Failure to have this done places the blame squarely on the shoulders of the family physician.

While complete immunization against measles has not been achieved, temporary passive immunity can be obtained by the use of immune serum globulin. This serum can be secured from the State Board of Health at no charge, and should be readily available in every physician's office.



Although no specific prophylactic and therapeutic measures have been developed for chickenpox, this common childhood infection is usually insignificant, and requires only symptomatic treatment and proper hygienic care to lessen the chance of infection of the vesicles or contamination of the eyes.

The hyper-immune or convalescent serum, formerly used in treatment of scarlet fever, was effective in reducing complications; but today, chemotherapeutic agents and antibiotics have a wider range of practical value. Aureomycin, if employed early enough after the onset of a streptococcic infection, seems to reduce the infection and toxic sequelae. If these diseases end by crisis soon after the administration of antibiotic medication, we must not forget that these patients are particularly susceptible to reinfection. They should have a prophylactic period of isolation, with the continued administration of the antibiotic for eight to ten days.

Typhoid immunization entails little risk to children, and, with the present-day intermingling of children in the public schools, summer resorts, day camps, and the like, general immunization programs should be made a routine practice, at least once every three years. Better still is an annual booster dose of vaccine.

Although tetanus has lost some of its previous horror, it still holds a mortality rate of from 20 to 25 per cent. No physician needs to encounter more than one death from this cause to convince him of its horror. Since the combined vaccines of diphtheria, pertussis, and tetanus seem to be synergistic and produce a better immunity at no greater risk than single antigens separately employed, multiple immunization is advisable for all children in early infancy. The best age for the initial dose of the combined vaccine is not later than the sixth month of life.

When immunization against any disease is attempted, it should not be begun before the third or fourth month of life, and four monthly injections are recommended. Smallpox vaccine should not be given until completion of the basic immunizations against diphtheria, tetanus, and pertussis. With improved vaccines, improved techniques, and greater care in history-taking, reactions of serious proportions have been greatly reduced, and only rarely does a case of encephalitis appear. If a severe reaction follows the first immunization dose, further immuniza-

tion is contraindicated. Immunization should never be carried out in the presence of an infection, impetigo, furunculosis, asthma, or generalized eczema.

### *Febrile Conditions*

I know of no condition in pediatrics which produces more acute concern to the mother and family than febrile convulsions. While convulsions are not uncommon in children with a sudden high temperature, this condition should not be minimized or labeled as "merely coming from an upset stomach." Peterman<sup>(5)</sup> found that less than 2 per cent of 25,000 patients admitted to the Milwaukee Children's Hospital had febrile convulsions, and Buchanan<sup>(6)</sup> states that the child with a history of even one convulsion has demonstrated that his cortex is less stable than that of his fellows. It has been clinically proven that from 15 to 20 per cent of the children who have convulsions associated with fever, have spontaneous attacks later in life. Lennox<sup>(7)</sup> says that febrile convulsions differ as a disease from epilepsy only with respect to severity; there is no real difference in duration.

Regardless of the cause and nature of the convulsions, the immediate treatment is reduction of fever. One or more of the time-honored methods of antipyretic therapy should be undertaken, and if the child is in an active convulsive seizure, sedatives, antispasmodics and perhaps synthetic narcotics should be administered. A thorough study of the disease should be made later to provide an adequate diagnosis as a necessary guide for proper treatment.

### *Fluid Balance*

Infants and children have a delicate electrolyte balance, and dehydration is a problem not only of negative water balance but also of electrolyte imbalance. Children suffering from dehydration may be divided into two groups: (1) those in whom the primary disturbance is deficiency of water; and (2) those in whom the primary disturbance is electrolyte imbalance. Diagnosis of the first group is relatively simple in that the findings are characterized subjectively by thirst and objectively by water loss. Children in the second group are usually in a state of collapse due to circulatory disturbances. They show apathy, weakness, somnolence, anorexia, nausea in variable degrees, and a fall of the

systolic blood pressure. At this stage, the urine output is low, and anuria may be present.

The practical clinical approach to dehydration is to consider the mode of onset, duration, amount of fluid loss, degree of thirst, and ability of oral fluid retention. The degree of dehydration can be determined by noting the dryness of the tongue, elasticity of the skin, condition of the eyes, and the presence or absence of edema. Unless proper therapy is instituted immediately, these patients rapidly grow worse and die. In the last analysis, recovery depends on adequate renal function to assist in eliminating the metabolic waste products of the body.

With the advent of hyaluronidase, fluids can be administered subcutaneously as effectively as intravenously, and perhaps with less risk of shock or cardiac stress. Ringer's solution is valuable in instances of dehydration acidosis. Large amounts of this solution can be given to combat acidosis and, at the same time, to provide adequate fluid. It should be remembered that dextrose solutions are of no value in replacing electrolyte loss, and the administration of these solutions contributes to the collapse or shock of the patient. Since dextrose solutions do spare the protein catabolism and help to prevent the formation of ketogenic acid, they should be administered with normal saline or lactated Ringer's solution after the patient has recovered from shock.

#### *Gastrointestinal Disturbances*

One of the most important causes of dehydration in infants is infectious diarrheas. In these cases, all possible means should be utilized to remove the cause and allay the irritability of the intestinal tract. Numerous reports concerning the treatment of diarrhea with pectin or a combination of pectin and some other therapeutic substance, have appeared from time to time. Pectin is hydrolyzed by the enzymatic action of the gastrointestinal tract, and combines with the toxic substances to render them innocuous. It also has a demulcent effect on the inflamed mucous membrane. Kaolin, which is chiefly hydrolyzed aluminum salicylate, is soluble in water, acids, and alkalis, and passes through the intestinal tract unchanged. Due to its absorptive powers, it removes toxins, bacteria, and gases from the intestinal canal, and at the same time provides a protective coating for intestinal lesions.

Sulfaguanidine, because of its low rate of absorption and the high concentration of the drug which remains in the intestinal canal, is highly satisfactory in the treatment of various intestinal infections of bacterial origin. Sulfaguanidine, combined in a balanced formula with pectin and Kaolin in a palatable vehicle containing aromatics and carminatives, is a preparation which has a definite place in the pediatric practice. Such a product is commercially available under the trade name of Paoguan, and can be administered in teaspoonful doses per kilogram of body weight every four to six hours as long as the diarrhea persists.

#### *Rickettsial Diseases*

Recently much attention has been given to Rickettsial diseases, of which Rocky Mountain spotted fever, typhus fever, and scrub typhus are perhaps the most significant. A vaccine against Rocky Mountain spotted fever is now available. It may be given in doses of 0.5 to 1 cc. to children under 12 years of age and in doses of 1 cc. to adults. Three subcutaneous injections should be given at intervals of a week or ten days, and yearly booster immunizations are recommended. It may be used where this disease is prevalent. In North Carolina 88 cases of the disease were reported in 1947, and 74 cases in 1948. We should take every precaution against tick bites which, of course, is primarily "to stay out of the woods." Those infected with the disease, should be watched closely for signs of peripheral circulatory failure. Good nursing care in a hospital is almost imperative. Good results have been obtained with the antibiotics, Chloromycetin perhaps being the drug of choice.

#### *Poliomyelitis*

Poliomyelitis is perhaps the most dreaded of the virus disease, and we have no safe method of producing immunity against it. Since there are several distinct strains of the polio virus, it is evident that any immunizing agent must be polyvalent. Natural immunity, fortunately, is widespread.

Until paralysis appears, no symptom is pathognomonic of poliomyelitis, though cases without paralysis may be diagnosed early and proper treatment instituted. The three phases of acute poliomyelitis are as follows: First is the prodromal phase, in which there is a sudden onset of headache, pain in the



back and limbs, fever, vomiting, and perhaps myalgia. At this point, the condition is indistinguishable from any acute infectious disease. There is no mental confusion or restlessness. If sore throat is the complaint, the diagnosis may be, and usually is, pharyngitis, tonsillitis, or common coryza. Second is the meningeal phase, which usually begins two or three days after fever is established. During this period weakness becomes obvious. When muscular rigidity of the neck, spine and limbs, and variation in reflexes are present, a presumptive diagnosis of acute poliomyelitis is justified, and proper therapeutic measures should be instituted. The third, or paralytic phase, is usually manifested on the second or third day after the meningeal invasion. Muscle tenderness and diminution or loss of deep reflexes signal the approach of flaccid paralysis. Progress of the paralysis is usually rapid.

Acute infections of the bones and joints, causing pseudo-paralysis, may be distinguished from polio in that pain associated with the former disease is articulate, and neighboring muscles are in a state of reflex spasmodic contraction, not of flaccid paralysis.

In every instance where poliomyelitis is suspected, the patient should have the benefit of a spinal tap and spinal fluid examination. This procedure requires no elaborate skill, and is about as easily performed as is an intravenous puncture or infusion. A relatively accurate estimate of the number of cells can be made by drawing the undiluted spinal fluid into the white blood cell counting pipette, then ejecting it upon the white cell counting chamber. The cell differential can be made from the counting chamber at the bedside if the high power lens of the microscope is used, and the relative number of lymphocytes determined. In every questionable case, the patient should have the benefit of a pediatric consultation, and should be transferred to a polio hospital if this step is indicated.

#### *Rheumatic Fever*

Among preschool age children, there is perhaps no single disease more serious than rheumatic fever. Rheumatic fever, with subsequent rheumatic heart disease, is a major public health problem; and, according to McMillan and Jones<sup>(8)</sup>, it is overlooked far more frequently than it is recognized. Estimates show that in our present population

there are 3 cases of rheumatic heart disease for every hundred persons under the age of 20, and 8 cases per thousand persons in the 40 to 50 age group. Rheumatic fever is known to be world-wide, but recently there has been a shift in the geographic distribution of the disease. Studies by McMillan and Jones revealed that the incidence of rheumatic fever and rheumatic heart disease is higher in certain areas of the South, notably the foothills and mountain areas of North Carolina and Alabama, than in any other section of the United States.

Because rheumatic fever is essentially a disease of the heart, every physician who practices any form of pediatrics should be ever alert to this condition and give to it the intensive study it deserves. It has been demonstrated that in the South rheumatic fever presents few of the usual characteristics of the disease, and thus it requires careful scrutiny for proper diagnosis.

The etiology of rheumatic fever appears to be a manifestation of atypical activity on the part of certain human hosts when exposed to external stimuli, particularly infections with group A, beta hemolytic streptococci. This places it among the so-called "collagen diseases," with hypersensitivity as an important element.

Three aspects of the prophylaxis of rheumatic fever must be considered: (1), prevention of the first attack; (2), prevention of a recurrent attack; and (3), prevention of cardiovascular damage during an acute attack. Preliminary reports seem favorable to the efficacy of penicillin troches for preventing infection by hemolytic streptococci, and Kahn<sup>(9)</sup> recently reported the results of a three-year study of the prevention of rheumatic fever by the administration of oral penicillin. He found a recurrent rate of from 40 to 50 per cent in patients who were not treated with penicillin, in contrast to no recurrence in the treated patients. A suggested schedule of administration, found most effective, was 800,000 units per day for the first seven days of the month.

Studies have shown that if penicillin is given within four days after the onset of an acute streptococcal infection, the chances of preventing the ensuing attack of rheumatic fever are good. It is possible that aureomycin may be a more reliable prophylactic drug for rheumatic fever because it is believed to be less apt to promote the devel-

opment of resistant strains of streptococci. The best approach to the control of rheumatic fever and rheumatic heart disease is to prevent an acute attack by administering penicillin at the onset of any streptococcal infection and to prevent recurrent attack by the use of sulfonamides, penicillin, or aureomycin.

### *Psychic Problems*

Irrespective of the seriousness of rheumatic fever, infantile paralysis, infectious diseases, and other ailments commonly seen in pediatrics, no problem is perhaps more serious or more neglected than the psychic or emotional factor which is certainly present in every growing child. Such habits as grinding the teeth, biting the nails, bed-wetting, night cries, and temper tantrums are fairly common during childhood. The extent of the habit depends upon the psychic factors underlying the child's development. A child, taught or untaught, will incorporate into his behavior the marked characteristics of the adults around him.

Emphasis should be placed upon the psychologic aspect of the child's home situation. Children grind their teeth because they want to bite something—a desire due to hostility. The habit is an outward manifestation of the normal child's aggressiveness when he becomes frustrated. If he bites the parent, he is punished; therefore, in fear of punishment, he bites himself. When this does not bring acceptable results, he expresses his rage in such refinements as grinding his teeth, throwing temper tantrums, bouncing his head on the floor, holding his breath, or some other method of self-punishment. The child's real needs are for more affection and understanding, and the physician must project himself into the child's emotional situation and learn why the child feels frustrated and angry.

Corporal punishment is of doubtful value, and may easily damage the cooperative aspect of the parent-child relationship. A physician, instead of prescribing "whip the hell out of him," should remember that the child is a reasoning being, and help the parents and the child to analyze their mistakes.

A child who is permitted to eat as much or as little as he likes, and, within reason, when he likes, will probably never become a feeding problem. A child who develops abnormal eating habits, such as spitting up his food, throwing his food on the floor, and stuffing

his cheeks without swallowing, has been given some cause for annoyance. It should be firmly stressed that if a child does not eat as his parents think he should, the difficulty is probably with them. It is the physician's duty to instruct the parents that it is their responsibility to trace the cause of the difficulty and correct whatever deficiencies exist.

All parents have a tendency, when their children behave badly or seem susceptible to illness, to blame a specific ancestor. Parents should know that children rarely inherit illness. They may contract it or mimic it, but disturbances which the parents ascribe to heredity are often the result of emotional conflict. The ancestors to blame for their children's strange behavior are the parents themselves. When a child is actually ill, however, a few simple measures may help him recover and keep him from getting sick again. When the child is taught to understand his malady, he becomes less afraid and is a more cooperative patient.

It has been established that mental health and emotional disturbances will require the future hospitalization of one out of every ten babies born today, and that medical treatment is required for at least one in five persons in this country alone. This is a subject about which all should be better informed, as it affects practically every family in the world.

### *Accidents and Injuries*

The normal child is naturally active, and it is only logical to expect him to stub his toe, cut his foot, black his eye, or sprain his arm. These injuries are common everyday occurrences and require no physician's services or, at the most, routine first-aid therapy. However, fractures about the elbow occur frequently and are often overlooked. Since good functional results are often difficult to obtain, all such fractures should be immediately referred to a competent orthopedic surgeon, and reduction accomplished as soon as possible.

Every rural physician (and many in the urban areas) has experienced the pandemonium which is created by snake bites and should be familiar with the first-aid management of these cases, even though he may not see more than one or two a year. It is satisfying to the parents of the victim, and very good first-aid therapy, to advise immediate application of a tourniquet just above the



bite, and transfer the patient immediately to the physician's office or clinic. The doctor should make a cross-cut incision through the fang marks, about  $\frac{1}{4}$  inch in length, being sure to go entirely through the skin. Instead of waiting for mechanical suction apparatus to remove the poison, he should apply mouth suction to the affected area. After this has been done, anti-venom should be administered. The present commercial anti-venom preparations are polyvalent, and are useful in treating bites from copperheads, rattlesnakes, moccasins, and others. After these first-aid measures are performed, the patient should be observed for sequelae. Should any doubt arise, he should be admitted to a hospital for blood studies and therapy as indicated.

#### *Diabetes*

Diabetes is another more or less common condition in the practice of every physician. It is of major importance when it occurs in infancy or childhood. According to Joslin<sup>(10)</sup>, diabetes is a disease which, from the cradle to the grave, belongs to the general practitioner. Young diabetics are in need of constant care and understanding. Even though they may live to outgrow the pediatric age group, they will never "outgrow" their diabetes. The general practitioner can tell the patient that if he controls the diabetes, his chances for growing old prematurely will be definitely postponed, and he will be less likely to develop the complications. The personal element and continued care by the same physician are almost as essential to the success of the therapy as are diet and insulin.

#### *Pneumonia*

Pneumonias of childhood are still to be reckoned with in the practice of pediatrics. Despite the effectiveness of sulfonamides and antibiotics, pneumonia still claims the lives of a large percentage of infants and children, and in many cases throws the family into a state of fear. This fear and confusion has recently been increased by the so-called virus or atypical form. Fortunately, these conditions are usually short-lived, and, with proper nursing care and symptomatic treatment, recovery usually occurs within five to seven days. Since the body's natural defense against virus infections of the respiratory tract is unusually low and there seems to be no lasting immunity developed by these in-

fections, it is necessary to build up the body's defenses as rapidly as possible.

#### *Tuberculosis*

Tuberculosis in childhood is an ever harassing problem. It is not uncommon to read on a roentgenologist's report: "Pulmonary pathology consistent with healed childhood tuberculosis." An estimated 50,000 die in the United States each year from this disease.

Experience accumulated during the past several years suggests that oral administration of BCG, when correctly handled, may be able to confer strong protection against the severe forms of childhood tuberculosis, and that the administration of large doses of BCG during the first six months of life to children who have been exposed to tuberculosis has decreased the mortality and morbidity rates to a gratifying degree. Observations by Brazilian investigators of more than 4,000 children given BCG vaccine indicated a control of tuberculous infections never attained by the conventional methods<sup>(11)</sup>. It was concluded that large doses of the vaccine in tuberculous positive children and adults is completely harmless.

#### *Oral Hygiene*

The importance of dental care and oral hygiene in the child and young adult cannot be overemphasized. Oral infections in early life represent potential disease in later years. The general practitioner can do a great deal toward eliminating these health hazards by giving his patients proper dental guidance.

Too much attention cannot be given the deciduous teeth. A normal healthy child should have a full set of 20 deciduous teeth at about  $2\frac{1}{2}$  years of age. The first permanent teeth, the 6-year molars, should erupt at about the sixth year of life. The poisons from diseased teeth and gums may have a far-reaching effect on the rest of the body. The Division of Oral Hygiene of the State Health Department inspects the mouths of from ten to twelve thousand children of school age every month. Even with this vast public health and educational program in our schools, however, forty-five million adults in the United States have not visited a dentist in two years or more, and four million have never visited a dentist at all.

#### *Congenital Disorders*

Few subjects in medicine are more con-

fusing than that of congenital heart disease, because of the multiplicity of lesions and the various combinations of lesions that may occur. In spite of the multiplicity of anatomic lesions, however, the over-all physiologic problem can be stated thus: (1) either the blood can be sufficiently well-aerated to support life for a considerable period of time, or (2) it cannot. Perhaps the most common congenital defect is that of the auricular septum, with a defect of the ventricular septum or a patent ductus arteriosus, running a close second. The important thing for the general practitioner to remember is that there are many more congenital than acquired lesions of the heart, and that nearly all the congenital lesions fall into a limited number of well defined patterns. A reasonably accurate diagnosis can be made ordinarily by utilizing modern diagnostic methods; but, regardless of the type of defect present, every congenital heart lesion should be given the best possible treatment known to the medical profession.

It is estimated that 14,000 new cases of congenital syphilis are reported each year in the United States, and that even with the advent of penicillin and rapid treatment centers, one-third or more of these patients are less than four years of age. The medical profession should go all out in its efforts to teach the public that any one of them is a candidate for such physical deformities as blindness, mental defects, or even premature death.

### *Conclusion*

I would say that the road ahead for the practice of pediatrics is more inviting and demanding today than ever before. General practitioners should feel that they have an ordained responsibility to the American family and to the American child—and they should join hands with their pediatric colleagues to see that better medical care is available for the American child, regardless of his station in life or his geographic location.

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## CLINICAL EVALUATION OF 1-(B-DIMETHYLAMINOETHOXY)-3-n-BUTYLISOQUINOLINE MONOHYDRO- CHLORIDE AS AN ANTIPRURITIC AGENT

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A topical anesthetic for the relief of itching should be potent, long-acting, nontoxic, and nonsensitizing. Moreover, it should be pharmaceutically prepared so as to be easy to apply, pleasing to the patient, stable in storage, and cosmetically acceptable. This report is a clinical evaluation of the antipruritic qualities of Quotane ointment and Quotane lotion.\* The active ingredient of these preparations is a local anesthetic, a new isoquinoline derivative (1-B-dimethylaminoethoxy butylisoquinoline monohydrochloride)<sup>(1)</sup>.

### *Material and Method*

Three hundred and seventeen patients with moderate to severe itching, chosen without regard to race, age, sex, or complexion, used the ointment or lotion for a few days to several weeks. The effectiveness of the preparations was evaluated on the basis of the patient's opinion as to the relief from itching that was obtained. The fact that most patients had previously employed other antipruritic preparations provided a basis for comparison.

In all instances, either the patient obtained relief without irritation or sensitization

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\*Supplied by Smith, Kline, and French Laboratories.



Table 1  
Effectiveness of Quotane Ointment

Diagnosis	No. Patients	Relief Obtained			
		Good	Moderately Good	Poor	Moderate to Good (Percent.)
Localized neurodermatitis (lichen simplex chronicus) .....	56	32	16	8	85.7
Generalized neurodermatitis (atopic dermatitis) ..	29	18	5	6	79.3
Senile pruritus .....	11	5	4	2	81.8
Otitis externa .....	17	11	4	2	88.2
Urticaria .....	6	3	2	1	83.3
Contact dermatitis (various causes) .....	17	9	5	3	82.3
Dermatitis venenata (poison ivy) .....	8	4	3	1	87.5
Dermatitis herpetiformis ..	4	2	1	1	75.0
Lichen planus .....	3	2	0	1	66.6
Ano-Genital pruritus (pruritus ani-vulvae-scroti) .....	63	36	16	11	82.5
Insect bites (chiggers) ..	4	2	1	1	75
<b>Total</b> .....	218	124	57	37	83.02

Table 2  
Effectiveness of Quotane Lotion

Diagnosis	No. Patients	Relief Obtained			
		Good	Moderately Good	Poor	Moderate to Good (Percent.)
Localized neurodermatitis (lichen simplex chronicus) .....	26	18	5	3	88.4
Generalized neurodermatitis (adult atopic dermatitis) .....	12	6	4	2	83.3
Otitis externa .....	8	4	3	1	87.5
Urticaria .....	4	3	1	0	100
Contact dermatitis (various causes) .....	7	4	2	1	86.7
Dermatitis venenata (poison ivy) .....	7	5	2	0	100
Ano-Genital pruritus (Pruritus ani-vulvae-scroti) .....	16	9	4	3	81.2
Infantile eczema .....	6	3	2	1	83.3
Atopic eczema (in children) .....	10	6	2	2	80
Insect bites (chiggers) ..	3	3	0	0	100
<b>Total</b> .....	99	61	25	13	86.86

and continued to use the preparation as directed, or the preparation, failing to relieve itching, was discontinued and its failure recorded in the data.

Both the ointment and the lotion have been used on areas ranging from small to the entire body surface, and in single applications and over periods of several weeks.

### Results

It is recognized, of course, that the subjective nature of itching makes such evaluations and comparisons difficult to interpret. Therefore, some of the results reported here could possibly be interpreted as coming from the ointment or lotion base alone, from psychosomatic influences, from spontaneous recovery, or from other unrecognized factors.

The degrees of response are summarized in tables 1 and 2. "Good" implies complete or almost complete relief from itching; "moderate" implies moderate to complete relief, for at least a short period; "poor" implies short-lived or insignificant relief.

Both Quotane ointment and Quotane lotion exerted an initial cooling and soothing action, followed by a somewhat lasting and prolonged antipruritic effect from the anesthesia produced.

Some of the patients complained of a burning sensation when either the ointment or lotion was applied, but patch tests in these

patients have failed to demonstrate a true primary irritation or evidence of sensitization.

### Comment

The ointment should be used on dry, erythematous, scaling, and papular type lesions; whereas the lotion, because of its drying action and the formation of a non-greasy film over the affected skin, is better adapted to exudative, weeping, and denuded areas. Either the ointment or the lotion may be applied to the affected areas several times daily. Each acts best when thinly spread over the skin surface, for a small amount applied properly is as efficacious as a larger amount.

### Conclusions

In our experience, Quotane ointment and Quotane lotion are equal or superior in effectiveness to other commonly used antipruritic preparations. The products are stable; the vehicles employed are bland, and are cosmetically acceptable to the patient. No patient proved to be sensitive to or was sensitized by either preparation. Further evaluation of Quotane ointment and Quotane lotion is recommended.

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## CLINICAL APPRAISAL OF A NEW ANTIPRURITIC

(*N*-ethyl-*o*-crotonotoluide)

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RALEIGH

The treatment of pruritus is surely no less a problem for those occupied with the general practice of medicine and surgery than it is for the dermatologist. Perhaps it is even a greater challenge, since often the dermatologist is spared the task of rendering the first treatment, which in the case of an itching dermatosis should be a symptomatic remedy, if no more. For this reason it is felt that the presentation of a purely clinical evaluation of a new weapon against a common complaint encountered in all types of practice is appropriate.

The medicament, as it is to be discussed here, is neither a specific for a certain group of dermatoses nor has it the capacity to alter the course of most cutaneous eruptions.

The chemical *N*-ethyl-*o*-crotonotoluide was first presented by Domenjoz<sup>(1)</sup> in 1946 as a scabicide. In animal experiments he had found it essentially nontoxic and nonirritating in various effective concentrations. Subsequent investigations have confirmed the fact that the substance is a satisfactory remedy for human scabies and, in addition, is an effective pediculocide. Burckhardt and Rymarowicz<sup>(2)</sup> first noted that in scabies itching was frequently abolished a few minutes after the first application. This observation has led subsequent workers to appraise the value of *N*-ethyl-*o*-crotonotoluide as an antipruritic in the nonparasitic dermatoses.

Couperus<sup>(3)</sup>, Peck and Michelfelder<sup>(4)</sup>, Soifer<sup>(5)</sup>, and Johnson and Bringe<sup>(6)</sup> have recently published accounts of their experiences with 10 per cent *N*-ethyl-*o*-crotonotoluide cream employed as a nonspecific antipruritic in a variety of itching dermatoses, and found it generally superior to other chemicals commonly used for this purpose. The clinical evaluation and results pre-

sented in this report essentially parallel theirs.

### *Material and Method*

This report is based on experience with 200 patients, virtually all of whom were from private practice. They were unselected except for the exclusion of those with scabies and other parasitic diseases. Follow-up on each patient was considered adequate for this type of clinical evaluation.

The patients were about equally divided as to sex. Both the white and Negro races were represented, though the former predominated. While most of the patients were adults, ages ranged from infancy to the very elderly. The duration of treatment varied from a few days to several months. In a considerable number of cases other forms of therapy were employed concurrently, but in no case were these topical antipruritics. In evaluating the medicament under consideration, an attempt was made to allow for the effects of such other treatment.

The preparation used in all instances was the commercial 10 per cent dilution of *N*-ethyl-*o*-crotonotoluide in a vanishing cream base which is marketed under the name Eurax\*. The patients were instructed to use it as frequently as necessary to obtain the best antipruritic effect.

### *Results*

Table 1 represents a summary of the results of treatment on these 200 patients. The classification of diagnoses, though rather arbitrary, was thought to be helpful in evaluating the indications for this medicament. In this table, "excellent" relief of pruritus means complete absence of itching for at least eight hours following each application; "good" relief means complete antipruritic effect for a somewhat shorter period, while "slight" implies something less than complete relief, even when the medication was applied every two or three hours. Since either "excellent" or "good" relief is considered satisfactory, these categories have been combined and presented as a percentage of the various totals. In like manner, those who received "slight" benefit have been added to those not helped at all, and are also shown in percentage for comparison. Thus it is seen that in all the dermatoses encountered in this group, 65 per cent of the patients received satisfactory antipruritic

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\*A product of Geigy Pharmaceuticals, New York.



Table 1.

	Relief of Pruritus			
	No. of Patients	Excellent	Good	Slight None
<b>NEURODERMATOSES</b> (Atopic dermatitis, circumscribed neurodermatitis, Disseminated neurodermatitis, Neurotic excoriations, Pruritus ani, vulvi, scroti)	100	39 70%	31	21 9 30%
<b>ECZEMATOID DERMATOSES</b> (Chronic contact dermatitis, Infantile eczema, Stasis dermatitis, Nummular eczema)	25	9 64%	7	6 3 36%
<b>TOXIC AND ALLERGIC ERYTHEMAS</b> (Dermatitis medicamentosa, Erythema multiforme, Unclassified)	10	6 80%	2	1 20%
<b>DERMATOSES DUE TO LIVING ORGANISMS</b> (Creeping eruption, Herpes zoster, Vulvar moniliasis, etc.)	13	2 38%	3	5 3 62%
<b>MISCELLANEOUS DERMATOSES</b> (Dermatitis venenata, Lichen planus, Lichen urticatus, Pityriasis rosea, Psoriasis, Seborrheic dermatitis, Senile pruritus, etc.)	52	12 60%	19	11 10 40%
<b>TOTALS</b>	200	68 65%	62	44 26 35%

Table 2.

	Number of Patients Reporting	More Relief than all other Topicals	Less Relief than some Topicals
<b>NEURODERMATOSES</b> (Atopic dermatitis, Circumscribed neurodermatitis, Disseminated neurodermatitis, Neurotic excoriations, Pruritus ani, vulvi, scroti)	70	56	14
<b>ECZEMATOID DERMATOSES</b> (Chronic contact dermatitis, Infantile eczema, Nummular eczema, Stasis dermatitis)	12	9	3
<b>TOXIC AND ALLERGIC ERYTHEMAS</b> (Dermatitis medicamentosa, Unclassified)	5	4	1
<b>DERMATOSES DUE TO LIVING ORGANISMS</b> (Herpes simplex, Herpes zoster, Infectious eczematoid dermatitis, Tinea corporis, Vulvar moniliasis)	6	4	2
<b>MISCELLANEOUS DERMATOSES</b> (Dermatitis venenata, Lichen planus, Miliaria rubra, Pityriasis rosea, Seborrheic dermatitis, Senile pruritus, etc.)	22	15	7
<b>TOTALS</b>	115	88 76.6%	27 23.4%

effect, and 35 per cent rather disappointing results. It is obvious that the poorest results (38 per cent satisfactory) were obtained in those dermatoses due to living organisms. In the other groups, satisfactory relief of itching occurred in from 60 to 80 per cent of the cases.

Since a study such as this must be based on subjective criteria alone, it was felt that when possible a comparison of the effects of N-ethyl-o-crotonotoluide to those of other topical antipruritics would serve in some degree as a control. All patients who had used other local remedies for the same complaints, therefore, were asked to compare the antipruritic qualities. Most of the common topical antipruritics, including many of the antihistaminics, had been used at one time or another, thus affording a rather broad spectrum for comparison. A group of 115 patients were qualified for this portion of the study. These, classified in the same manner as table 1, are presented in table 2. Eighty-eight patients, or 76.6 per cent, preferred N-ethyl-o-crotonotoluide cream to all other local remedies tried, while 27 patients found one or more topical medicaments superior to this cream.

### Comment

Purely symptomatic medication is a poor substitute for accurate etiologic diagnosis and specific therapy. There is always, however, a field of use for an efficient antipruritic. It appears that N-ethyl-o-crotonotoluide is such an agent, and for certain itching dermatoses is superior to most of the previously employed topical remedies. Except in

scabies and other parasitic dermatoses in which the chemical is indeed specific, it appears to have little or no influence on the objective findings. However, in this group of 200 patients a few, particularly those with an early and mild neurodermatitis, improved in regard to their eruption, seemingly as a result of the local therapy.

In all of the patients, itching was a prominent symptom. This was true even for those with eruptions, such as psoriasis, which are not commonly pruritic. The degree of relief afforded by this medicament was often striking, and the over-all results as reflected in table 1 are rather impressive. It appears that the remedy is especially acceptable in many of the neurodermatoses, particularly pruritus ani, scroti, and vulvi. Of the patients with neurodermatosis, 70 per cent obtained a complete antipruritic effect with application of the cream approximately two or three times daily. Such results are especially gratifying in this type of case where specific remedies are lacking and symptomatic relief is important in ultimate recovery. The effectiveness of the remedy appears to be rather well sustained, corroborating previously published comment that it did not "wear out" as readily as some other antipruritics—a distinct virtue in the chronic or relapsing neurodermatoses.

Though N-ethyl-o-crotonotoluide has been shown to have some bactericidal properties,<sup>(1,2)</sup> its value in the treatment of the infectious dermatoses appears limited. More specific agents against bacteria, fungi, and viruses are available, and in the group reported here little antipruritic effect was observed.

In the eczematoid dermatoses, the toxic erythemas and various dermatologic entities such as lichen planus, pityriasis rosea, seborrheic dermatitis, and the like, this topical symptomatic medication may prove useful as an adjunct to more specific therapy.

Important factors in evaluating any topical medicament are its potentialities as an irritant and a sensitizing agent. Previous publications—especially those of Couperus<sup>(3)</sup>, Peck and Michelfelder<sup>(4)</sup>, and Tronstein<sup>(7)</sup>—have recorded but few examples of intolerance to N-ethyl-o-crotonotoluide cream. Several hundred cases have been followed by these workers and only one example of sensitization to the active ingredient was discovered. In the remaining few who were intolerant to the preparation, the vehicle was found to be the offending substance. In the 200 cases reported here, 6 persons found the preparation more or less irritating. In patch tests on 4 of these, one was found to have developed a sensitivity to N-ethyl-o-crotonotoluide. No positive patch tests to the washable ointment base were obtained. This low sensitizing index compares favorably with most other topical antipruritics, including the antihistaminics.

No supported evidence of side reactions or systemic toxicity have been observed. However, a word of warning relative to the use of this preparation in acute dermatitis should be injected. It almost always proves quite irritating and should be avoided in such conditions as the early stages of dermatitis venenata (poison ivy). In many instances patients reported a sensation of warmth about the groin a few minutes after application, but this was neither severe nor objectionable.

#### Summary

Thus N-ethyl-o-crotonotoluide cream appears to be a satisfactory antipruritic, superior in most cases to more familiar ones, apparently without toxicity, and possessing a low index of irritation and sensitization. Its sustained period of effectiveness and tendency not to "wear out" are definite assets.

Its field of usefulness for all physicians is limited by its strictly symptomatic effectiveness. It will not establish a correct diagnosis nor act as a specific remedy except in the parasitic dermatoses. It is valuable as an antipruritic (1) for "emergency" treatment; (2) for temporary relief while the

diagnosis is being established; and (3) as an adjunct to specific therapy.

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### EUGENIC STERILIZATION IN NORTH CAROLINA

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One method of preventive medicine, the sterilization of the insane, the feeble-minded, and the epileptic, is supervised by the Eugenics Board of North Carolina. The Board's biennial report for the period ending July 1, 1950, tells of its most recent accomplishments.

#### Authorization Procedures

Petitions for the sterilization of a mentally diseased, feeble-minded, or epileptic person may be initiated by a county superintendent of welfare, or the head of a state institution. If the Board finds that the operation is for the best mental, moral or physical improvement of the patient, or for the public good, it may authorize the procedure.

The law establishing the Eugenics Board provides that no one participating in an authorized sterilization shall be either civilly or criminally liable. This gives the surgeon protection which the consent to an operation signed by a person known to be insane, feeble-minded, or a minor, might not furnish.

#### Analysis of Authorized Sterilizations Since 1929

In the twenty-one years since its establishment in 1929, a total of 2,538 operations have been performed after authorization by the Eugenics Board<sup>(1)</sup>. A great majority—2,030—have been performed on females. This is probably due to the fact that men are less willing to believe that the only effect of sterilization is the prevention of parenthood.

Sixty per cent, or 1,528, of the operations have been performed by county institutions.



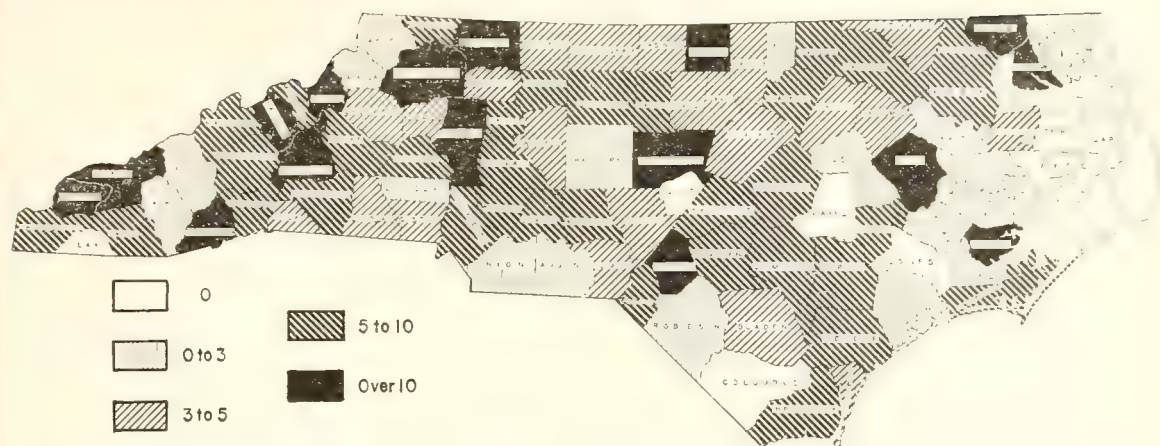


Fig. 1. Annual sterilization rate per 100,000 population, in North Carolina, July 1, 1948-June 30, 1950. (Source: Biennial Report of the Eugenics Board of North Carolina and U. S. Census, 1950.)

Although there are undoubtedly more persons outside of institutions for whom the operation is appropriate than there are within, the requirement that the county must provide the cost of non-institutional operations acts as a deterrent. County health budgets are generally inadequate to cover this form of preventive medicine.

Feeble-mindedness has been the basic reason for 1,697 (67 per cent) of the sterilizations, mental disease for 575 (23 per cent), and epilepsy for 266 (10 per cent).

In the majority of cases, salpingectomy or vasectomy was the procedure employed. Castration, though authorized by law, is employed only when indicated for reasons other than the prevention of parenthood. Only 60 male and 17 female castrations have been performed under the law, none of which were reported during the last biennium.

Of those sterilized under the law, 23 per cent were Negro. That this figure is lower than the proportion of Negroes in the population of the state—approximately one-third—is due partly to the fact that the state hospital caring for the Negro insane and feeble-minded has not had sufficient surgical services to perform many of these operations.

#### *The Latest Biennium*

Since July, 1947, better understanding of the eugenic sterilization law has resulted from the employment of a full-time secretary for the Eugenics Board. The 468 operations reported during the two years ending July 1, 1950, are more than in any similar previous period. Some of the increase is due to the protection of patients in five state institu-

tions where none had previously been sterilized. The total of those sterilized in institutions during the two years was 225, or 48 per cent of the total.

Non-institutional sterilizations also showed an increase, totaling 237, even though there were none in thirty-one of the 100 counties.

As in previous years, males were in the minority, constituting only 15 per cent of the total. The racial proportion (21 per cent Negro) shows little change from previous years.

Among the counties, Buncombe led in the number of protective sterilizations, with 24, followed by Guilford and Mecklenberg, with 22 each. Forsyth reported 19, Iredell and Pitt 15 each, Rowan 14, and Surry 12. When the number of operations is considered in relation to the 1950 population, Graham had the highest rate for the two years, with 29 per year per 100,000 population, Transylvania and Perquimans each had a rate of 26, Gates had 21, Swain 20, Avery 19, and McDowell 16. Figure 1 shows the rates for each county. The average for the entire state was 5.3 per year per 100,000 population.

That the protection rate is still increasing is shown by the report of 132 operations in the first half of 1950, and of 144 in the last half<sup>(2)</sup>.

#### *The Sexual Effects of Tubectomy*

Two recent studies in North Carolina have confirmed previous findings that in the majority of cases tubectomy is without demonstrable effect on the sex life. Woodside<sup>(3)</sup>, a British social worker, interviewed 48 mentally normal sterilized women. Five who re-

ported a slight decrease in sexual activity were outnumbered by eight who told of an increase. Similarly Garrison and Gamble found, among 50 mentally normal vasectomized males, 4 who stated that frequency of coitus had decreased, while 8 said it had increased<sup>(4)</sup>.

#### *Eugenic Sterilization is Voluntary*

The Eugenics Board states: "No attempts have ever been made to force persons to have the operation against their wishes." For the last two years, the written consent of the patient and that of the next of kin were on file for 522 of the 543 authorizations. For the remaining 21, hearings were held to meet the legal requirement. Operations have been performed, with the consent of the patient, following 17 of these hearings. The remaining 4 cases are still pending.

Failure to secure the consent of the next of kin may arise from causes other than opposition to the operation. For example, the husband of a separated couple may refuse to sign any papers relating to his wife.

#### *The Results of Sterilization*

Estimates of unfavorable heredity prevented by tubectomy are necessarily indirect. From the former birthrates of women sterilized in New Hampshire, Tietze and Johnson estimate that an average of 2.5 births each were prevented by sterilization<sup>(5)</sup>. Thirty-six per cent of the children born to these women before the operation were feeble-minded<sup>(6)</sup>. Assuming that this rate would have continued, the birth of 90 feeble-minded children was prevented by each 100 sterilizations. The same authors estimated that birthrates among the sterilized males would have been half as great.

If the same percentages prevail in North Carolina, the 468 sterilizations of the last biennium will mean 390 fewer feeble-minded North Carolinians, an important accomplishment of this public health procedure.

That the percentages are similar in this state is indicated by a study, the beginning of which is described in the biennial report of the Eugenics Board<sup>(1)</sup>. Mental examinations are being given to all accessible children born, before the operation, to persons sterilized in certain years. Of the 51 children thus far examined, 50 per cent had an intelligence quotient below 70.

That North Carolina has been spared the birth of a large number of unfortunate and

undesirable citizens—potential victims of an unfavorable heredity and upbringing—is indicated by the fertility rates of those sterilized. At the average age of 24, the 468 persons sterilized during the biennium had had 873 children—an average of 1.86 each. Many otherwise fertile years still lie ahead.

#### *The Need for Public Education*

As with other procedures in preventive medicine, complete application is delayed by public ignorance. The effectiveness of the full-time secretary of the Eugenics Board in making its assistance readily available to the staffs of state institutions and county welfare superintendents, has done much to expand the protection of the next generation.

Public education is also being furnished by another North Carolina group, the Human Betterment League, with headquarters in Winston-Salem. Through pamphlets and other educational media this organization is spreading the knowledge that sterilization can prevent an undesirable mental inheritance in the next generation, and that it involves no sexual sacrifice.

It is to be hoped that the work of these organizations can be supplemented by members of the medical and nursing professions, to whom the inquiring public will turn to learn of this new and little-understood procedure of disease prevention.

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#### **Armour Laboratories Plans to Open New Division Offices in Dallas and New York**

The Armour Laboratories will shortly open two new division offices in New York and Dallas, Texas, to take care of rapidly expanding demands for its pharmaceutical products. A third—in San Francisco—is now being organized.

The Armour Laboratories developed ACTH, latest of medicine's so-called "wonder drugs," and is the principal source of supply. It also manufactures and distributes many other medicinal drugs of animal origin, such as thyroid hormone in various forms, other pituitary and gonadal hormones, several types of liver extract and numerous rare enzymes.



## THUMBNAIL SKETCHES OF EMINENT PHYSICIANS

CALVIN JONES  
(1775-1846)

DOROTHY LONG\*  
LEXINGTON, KENTUCKY

In the early years of the nineteenth century there were several prominent doctors in Raleigh and the surrounding area, one of the best known of these being Dr. Calvin Jones, who was born in Great Barrington, Massachusetts, in 1775. We do not know where his education was obtained, but he must have begun the study of medicine in boyhood, since at the age of 17 he received, following an examination, a certificate or medical license later owned by his descendants. This certificate, awarded June 19, 1792, stated that Calvin Jones was a "candidate for examination in the Healing Art before the United Medical Society. He was likewise examined and approved of by the said Society as being well skilled in the Theory of the Physical Art, and by them is recommended to the Publick, as per order of James Batten, president. Doct. David Doty, Secretary."<sup>(1)</sup>

After practicing for a while in New England, Dr. Jones settled in Smithfield, North Carolina, about 1795, and there gained the reputation of being a progressive and enlightened physician. He is known to have practiced surgery with success, and he was probably the first in North Carolina to use vaccination instead of inoculation for smallpox, having begun the practice even before Jenner had completed his experiments. Though he had in earlier years published notices that he would accept patients for inoculation, in 1801 he did not inoculate because news of Jenner's work had reached this country. In the Raleigh Register for April 14, 1801, Dr. Jones wrote, "It is the hope of seeing the Vaccine Disease substituted for Smallpox, that alone induces me to decline the inoculation." Mrs. Johnson, in her book *Ante-bellum North Carolina*, adds the statement that he wrote much for the newspapers of the state, explaining the effect of vaccination for smallpox, in the hope of helping to eradicate the disease<sup>(2)</sup>.

Dr. Jones published articles on other professional subjects, and was the author of "A Treatise on the Scarlatina Anginosa, or what is vulgarly called the Scarlet Fever, or Canker-Rash, replete with everything necessary to the pathology and practice, deduced from actual experience and observation, by Calvin Jones, Practitioner of Physick." This was published in Catskill, New York, in 1796, by Mackay Crosswell and Dr. T. O. Crosswell. Among his other accomplishments, this versatile doctor helped to organize the North Carolina Medical Society in 1799, and was for a while its corresponding secretary, as well as a frequent contributor to its programs.

About 1803 Dr. Jones moved to Raleigh and continued there both his practice of medicine and his interests in political and educational matters. He had already been, and was to be again, a member of the North Carolina House of Commons, and was also elected mayor of the town. From 1808 to 1815, Jones was associated with Thomas Henderson in publishing a newspaper called the *Star*, an unusual publication in that it devoted a large part of its space to literature, history, science, and religion. It was this paper which published a series of articles describing the counties of the state, one of the descriptions being written by Dr. Jeremiah Battle, another physician of this section.

Dr. Jones was also active in military affairs, taking part in the war of 1812, and his interest in education is shown by the fact that he was for thirty years a member of the board of trustees of the University of North Carolina, and was considered one of the most active in its behalf.<sup>(3)</sup> Dr. Jones was listed among the early donors of books to the library of the university, and later presented it with his collection of "artificial and natural curiosities."<sup>(4)</sup> In 1832 he settled on a plantation in Bolivar, Tennessee, where he remained until his death in 1846.

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4. *Ibid.*, p. 302.

The basic treatment of tuberculosis is rest. Other treatment, whether by drugs or collapse therapy, is not a substitute for rest but merely supplemental.—Charles R. Smith, M.D., J. Michigan State M. Society, November, 1949.

\*Assistant reference librarian, University of Kentucky, Lexington, Kentucky. Miss Long has written another sketch of an eminent North Carolina physician, which will appear next month.

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"The prime object of the medical profession is to render  
service to humanity; reward or financial gain is a subordinate  
consideration. Whoever chooses this profession assumes the  
obligation to conduct himself in accord with its ideals."—Prin-  
ciples of Medical Ethics of the American Medical Association,  
Chapter 1, Section 1.

NOVEMBER, 1951

### TESTS FOR ALCOHOLIC INTOXICATION

Since July 19 the police department of Winston-Salem has been allowing persons accused of driving drunk to take one of the tests for determining the concentration of alcohol in the blood. For some time before the policy was actually adopted, Dr. William A. Wolff, toxicologist at Bowman Gray School of Medicine, tested a number of individuals known to be drunk and an equal number of sober ones, and was convinced of the accuracy of the method used—that of blowing the breath into a properly prepared balloon. A sample of blood may also be used for the test.

Of the first 11 men arrested for drunken driving, two were sent to the hospital instead of to the jail. The first, a 24 year old

white man, had had an automobile accident and sustained two cuts on his forehead. He admitted having had "one small drink" and had every appearance of having had many more; but the test showed only a minute quantity of alcohol—far below the intoxication level. At the hospital it was found that his skull had been perforated and that he had had, at least, a concussion severe enough to account for his symptoms.

The second case involved a 39 year old Negro man who sideswiped two parked cars, then veered crazily all over the street, and wound up by hitting a truck. When arrested, he was dazed and staggered unsteadily. His speech was thick, and the officer was sure that he was drunk; but the "intoximeter" showed not a trace of alcohol. He was carried to the hospital, where it was found that he had a severe hypertension and had had a stroke.

In addition to patients with cerebral accidents (including concussions), diabetics are particularly apt to seem intoxicated, either from acidosis or from insulin shock.

Eleven cases is, of course, a small series from which to draw conclusions; but even if the proportion of drivers proved innocent is much less than the nearly 20 per cent thus far found, the test is still well worth while. At least three states in the union—Indiana, Maine, and New York—have laws giving those accused of driving while intoxicated the benefit of the test, and nearly every state recognizes it as legal evidence.

It may be pertinent to recall that in 1938 our State Medical Society adopted a presidential recommendation urging "the passage of a law requiring (or allowing) any individual charged with drunkenness to have the alcohol content of his blood tested as a measure of intoxication."<sup>(1)</sup> The 1939 legislature, however, preferred to continue the antiquated method of guessing, when it was possible to know, and so North Carolina missed a glorious opportunity to be the first state to recognize this sensible and scientific test. It is to be hoped that other cities and towns in the state will follow Winston-Salem's lead in this matter.

1. Tr. Med. Soc. North Carolina, 1938, p. 9.



## THE NEW YORK STATE ACADEMY OF GENERAL PRACTICE

During the last three days in October the New York State Academy of General Practice held its third annual scientific assembly at the Hotel Statler in New York City. It is now too late to count the number attending the symposiums from 9 to 12 (or 12:30) every morning and from 2 to 5 (or 5:30) every afternoon, but it is highly probable that such a count would have shown that the assembly was an illegal one. A large placard in the Skytop Room warned that occupation by more than 576 persons was unlawful. It was an inspiring and thrilling sight to see every seat in the room and virtually all the standing room occupied by men listening intently to the speakers.

The program was well balanced and up to date. Monday morning, October 29, after an address by Dr. J. Stanley Kenney, president of the New York State Medical Society, ACTH and cortisone were discussed in a symposium presided over by Dr. James M. Carlisle. That afternoon discussions of the anticoagulants, the antibiotics, and the isotopes constituted a symposium on the newer therapy, with Dr. J. P. Sanders as the presiding officer. Tuesday morning a symposium on cancer was presented, with Dr. Frank Adair as chairman. Tuesday afternoon Dr. Walter Alvarez was chairman of the discussion on functional disorders. On Wednesday morning Dr. Elmer L. Sevringhaus led the discussion on nutritional and metabolic disorders. The final session, that afternoon, was devoted to everyday practical procedures, with Dr. Rufus B. Robins presiding.

Most of the speakers were well known figures in medicine, but they had been selected carefully by the program committee as much for their ability to present their subjects in an interesting manner as for their reputation. The close attention paid by their audience, and the number of pertinent questions handed in at the close of each symposium, showed that the members were there for serious business, and not merely for the sake of the 15 hours credit allowed by attendance on the sessions.

Dr. Rufus B. Robins, president-elect of the American Academy of General Practice,

was an ideal toastmaster at the annual banquet on Tuesday night. The editor of this journal gave the principal address on the subject, "The General Practitioner—Past, Present, and Future." The invocation by Cardinal Spellman was a beautiful prose poem. Mayor Impellitteri was to have extended the welcome in person, but was unable to attend and sent his message by telegram. Among the guests at the banquet were Dr. Louis H. Bauer, president of the American Medical Association; Dr. J. Stanley Kenney, president of the New York State Medical Society; and Dr. J. P. Sanders, president of the American Association of General Practitioners. While the guests stood, the orchestra played "America" and then swung into "Dixie," at which the few Southerners present stood and applauded.

One came away from the meeting impressed by at least three things: (1) the excellent balance and variety of the program; (2) the enthusiasm and sincerity of the members in attendance; and (3) the genuine hospitality and friendliness of the officers and members of the New York Academy of General Practice. Such a meeting is evidence that the general practitioner is coming more and more into his own.

\* \* \*

## THE FAMILY DOCTOR IN BRITAIN

The dissatisfaction of British doctors with their National Health Service seems to be increasing steadily. Three of the eight pages of the *Supplement to the British Medical Journal* for July 7 is devoted to an article, "The Family Doctor," by George MacFeat, O.B.E., M.B. The first and last paragraphs are quoted in their entirety.

"The National Health Service has now been in operation for over two and a half years, and we find (1) that the family doctor status and the standard of service are seriously threatened with deterioration; and (2) that uncertainty and dissatisfaction exist among hospital staffs, especially among the younger members about their grading and employment within permanent establishments.

"Abuses of the Health Service are evident everywhere, and these must lead to more and more regulations, their tighter enforcement and greater penalties for their violations, further limitations on freedom, and further deterioration of the quality of medicine. In the end the great consumer group will suffer most. Sad as is the state of the practitioner of medicine in Britain, the plight of medicine itself is more serious; but what is most to be deplored is the present and future effect on the quality of medical care received by the English people. 'Where there is no vision the people perish.'"

## THE SCRIPTURE AND SOCIALISM

Although communism and Christianity have nothing in common, the experiment of the early Christians in Jerusalem, who "shared all they had with one another," has been cited again and again as Scriptural precedent for communism or its near relative, socialism. Those who use the first few chapters of The Acts of the Apostles as authority for advocating the welfare state overlook two pertinent facts. The sharing was not planned or controlled by any governmental agency, but was a voluntary experiment undertaken by a religious organization. Even so, it ended disastrously when two of the church members—Ananias and his wife Sapphira—succumbed to the frailty of human nature and paid with their lives for lying about their joint income.

Further proof that the early Christians were not New Dealers is to be found in the second letter written to the Thessalonians by the Apostle Paul, who was one of the greatest intellects of all time.

"Brothers, we charge you in the name of the Lord Jesus Christ to shun any brother who is loafing . . . For you know very well we did not loaf in your midst, we did not take free meals from anyone; no, toiling hard at our trade, we worked night and day, so as not to be a burden to any of you. . . . We used to charge you, . . . 'If a man will not work, he shall not eat.' But we are informed that some of your number are loafing, busybodies instead of busy. Now in the Lord Jesus Christ we charge and exhort such persons to keep quiet, to do their work and earn their own living."<sup>(1)</sup>

Comment would be superfluous.

1. II Thessalonians 3:6-12 (Moffatt's translation).

\* \* \* \*

## DR. HERBERT M. VANN

Hundreds of doctors, not only in North Carolina, but all over this country and even in distant parts of the world, will mourn the passing of Dr. Herbert M. Vann, who died of coronary heart disease on October 28.

For more than a quarter of a century he had taught anatomy to successive generations of students at the medical school of Wake Forest College—first when it was a two year school, and later when it was expanded to a four year school and moved to Winston-Salem.

Dr. Vann taught much more than the dry facts of anatomy. From him students learned respect for the human body and its Maker; they learned that medicine is a jealous but a just mistress. As for their teacher, they learned first to fear "The Major," as he was generally known, then to admire him, and finally to love him as few of their teachers were loved. They learned that he was their friend, who would do anything that he honorably could to help them. After they graduated from medical school and finished their hospital training, they looked upon him as a connecting link between them and their Alma Mater. As permanent secretary of the Wake Forest Medical Alumni Association and chairman of the Library Fund, he kept in touch with all his former students, and they with him.

His colleagues learned that he could be depended upon to carry out any task assigned him, and to do it cheerfully. As a result, when the end came, the question, "Who will take his place?" was quickly amended to "Who will take his places?"

Dr. Herbert Vann's father was a doctor, and it is good to know that his son, Robert, is carrying on the family tradition. He graduated from Bowman Gray in 1945, and, after an internship and a few years of general practice, is now on the house staff of the pediatrics service in the North Carolina Baptist Hospital.

On behalf of Dr. Vann's colleagues on the Bowman Gray faculty, of Wake Forest alumni everywhere, and of the members of the Medical Society of the State of North Carolina, this journal extends deepest sympathy to his family.

**The Physician's Duty to Himself.** In reviewing the rather extensive literature on medical ethics and its related subjects, it has seemed to me that too little has been said about the duty the physician owes to himself, his family and to his patient, to keep himself in the best possible state of well-being. It will enable him not only to be of service for more years, but to do better work each day. There is no use for me to outline a program of rest, sleep, recreation and work; of proper eating, of moderation and temperance—you know these things as well, or better, than I do. As Osler said in another connection, "It isn't not knowing but not doing that gets us into trouble." We should consider it an obligation and a privilege to be calm, cheerful and kindly. I have suggested only one specific prayer to those looking to me for guidance—"Lord, help me to live this day straight, clean, cheerful and efficient."—Bethea, O. W.: *Medical Ethics*, The Mississippi Doctor 28: 376 (April) 1951.



## Clinicopathologic Conference

*Bowman Gray School of Medicine of  
Wake Forest College*

A 48 year old white woman, the mother of one child, was admitted to the North Carolina Baptist Hospital for the first time on February 2, 1951, complaining of jaundice. She had been apparently well until August of 1950, at which time she noticed the onset of severe weakness and loss of appetite. Upon consulting her physician in September, 1950, she was told that she was jaundiced and that her liver was enlarged. Shortly after this she noted pruritus and rapidly increasing jaundice, associated with slight nausea, vomiting, and marked malaise. Her stools were sometimes clay-colored, and her urine dark. She was admitted to another hospital, where she was seen by many physicians, and was thought to have hepatitis. A liver biopsy at this time showed findings compatible with obstructive jaundice.

An exploratory laparotomy performed on October 10 showed no abnormality, and a biopsy of the pancreas was reported normal. A T tube was placed in the common duct. This drained poorly for several days, and then produced as much as 400 cc. of dark-colored bile daily. Lipiodol studies of the biliary duct showed a normal flow of the dye into the duodenum. The patient began to have chills and fever, and a subdiaphragmatic abscess was suspected. A second exploratory operation was performed, but no abscess was found. Following this operation the T tube was removed. She continued to have a moderate fever with occasional chills, remained jaundiced, and continued to lose weight.

When the patient was admitted to the North Carolina Baptist Hospital, the *physical examination* showed the temperature to be 101 F., pulse 92, respirations 18, blood pressure 100 systolic, 50 diastolic. The patient was thin, poorly nourished, markedly jaundiced, and chronically ill. There was moderate internal strabismus of the right eye. The lungs were clear to percussion and auscultation; the heart was not enlarged, and there were no significant murmurs. There were two recent abdominal scars, one in the right upper quadrant, and one just to the right of the midline. The liver was

palpated four fingers' breadth below the right costal margin, and was moderately tender. No significant lymphnode enlargement was found. The neurologic examination was negative.

*Laboratory data:* The urine was acid and dark amber, with a specific gravity of 1.014; tests for albumin, sugar, and urobilinogen were negative; a test for bile was positive. Microscopic examination showed many white cells and rare red blood cells. Blood studies revealed a hemoglobin of 13 Gm., a red cell count of 4,200,000, and a white cell count of 40,000, with 73 per cent segmented polymorphonuclears, 14 per cent non-segmented cells, 11 per cent lymphocytes, and 2 per cent monocytes. The total serum proteins were 4.9 Gm. per 100 cc.—albumin 3.3 and globulin 1.6. The carbon dioxide combining power was 24 milli-equivalents per liter, chlorides were 92 milli-equivalents per liter, serum amylase was 40 units per 100 cc., and bilirubin 38.8 mg. per 100 cc. Blood cholesterol was 204 mg. per 100 cc., fasting blood sugar 100 mg. Alkaline phosphatase was 24.9 Bodansky units. The nonprotein nitrogen was 42 mg. per 100 cc. on admission; at a time when the nonprotein nitrogen was 81 mg. per 100 cc., the blood urea nitrogen was 52 mg. per 100 cc. Cephalin flocculation was 2 plus in 24 and 48 hours, thymol turbidity 3 plus. The prothrombin time was 19.4 seconds against a control of 15.8 seconds.

Serologic tests for syphilis were positive, although they had been reported as negative in the other hospital. Stools were light brown in color and negative for guaiac, but positive for bile. Blood cultures and cultures of the draining bile were positive for *Pseudomonas*, which was resistant to Chloromycetin and terramycin in concentrations of 30 micrograms per cubic centimeter, but sensitive to both drugs in concentrations of 60 micrograms per cubic centimeter. It was resistant to streptomycin in a concentration of 10 micrograms per cubic centimeter.

Roentgenograms of the chest and abdomen revealed infiltration in the right apex, marked elevation of the right dome of the diaphragm, and intraperitoneal fluid. Later chest films revealed pleural effusion on the right side. Another liver biopsy revealed minimal fibrosis and portal inflammation with evidence of obstruction. Nothing to suggest malignancy was found.

*Course in the hospital:* Throughout her hospital stay the patient remained intensive-

ly jaundiced, and the serum bilirubin showed values as high as 40 mg. per 100 cc. She ran a continual fever, which ranged as high as 105 F. Chloromycetin, dihydrostreptomycin, Gantrisin, and terramycin were given without effect on the temperature. She was treated for her liver disease with multiple vitamins, crude liver extract, vitamin K, methionine, intrahepatal, and concentrated human albumin, as well as several blood transfusions. Her course was stormy, being marked by several periods of shock and one episode of decreased urinary output, with elevation of the nonprotein nitrogen to 106 mg. per 100 cc. This subsequently fell to 37 mg. per 100 cc. prior to death. An external biliary fistula developed spontaneously and drained moderate amounts of bile. Bile peritonitis resulted in paralytic ileus, and Wangensteen suction was instituted. The acid-base balance became a major problem, with the carbon dioxide combining power dropping as low as 10 milli-equivalents per liter and blood chlorides to 83 milli-equivalents per liter. These values were restored nearly to normal by intravenous fluids.

On March 1 a third exploratory laparotomy was performed. Approximately 4,000 cc. of dark green bile was removed, but no definite abscess was found. The duodenum was inadvertently opened and closed. The patient's course remained stormy, and she expired quietly on March 2, 1951.

#### *Clinical Discussion*

*Dr. David Cayer:* This 48 year old woman presents an interesting problem in the differential diagnosis of jaundice. In such a case it is usually necessary to differentiate between an obstructive or surgical type of jaundice and an infectious, inflammatory, or degenerative process which primarily involves the liver cells and in which surgery is contraindicated. On the basis of incidence, the most likely etiologic diagnoses would be stones or malignancy on the one hand, and hepatitis or cirrhosis on the other.

The remaining cause of icterus—namely, hemolytic jaundice—can be pretty well ruled out by the history of pruritus—a symptom which does not occur as the result of hemolysis.

The history at once focuses our attention on the possibility that we are dealing with an obstructive type of jaundice. The patient is approaching the age group in which ob-

struction due to stone or malignancy is more frequent. Furthermore, there is no history of any recent operation, occupational exposure to known liver toxins, injections, transfusions, alcoholism, heavy metal therapy, or infectious disease to suggest that this might represent hepatitis or cirrhosis. As far as we know, her diet was adequate until the onset of her present illness. The relative absence of pain at the onset is more suggestive of obstruction by a malignant lesion than of stone, since approximately three fourths of the patients with obstructive cholelithiasis usually give a history of colic, chills, or fever. Although malignant tumors obstructing the common bile duct are frequently described as insidious and painless, pain may be present as one of the presenting symptoms in as many as 40 per cent of such cases. Because of these evidences of obstruction, a liver biopsy was done. It was reported as showing changes compatible with an obstructive type of jaundice. The error most commonly made in an attempt to differentiate the obstructive from the non-obstructive type of jaundice is surgical exploration of the patient who does not have obstruction. As a rule, when the diagnosis is in doubt it is wise—and, in most instances, entirely safe—to temporize as long as six to eight weeks, provided the patient can be carefully observed and necessary diagnostic studies repeated at intervals. Patients with the inflammatory or degenerative type of liver cell disease are poor candidates for surgery; while those with obstruction to the bile duct, even if it be complete, tolerate surgical procedures quite well. They are usually able to eat and can be adequately prepared for surgery. A delay of six to eight weeks causes no great increase in the operative risk.

In the third month of this patient's illness, an exploratory operation was performed. Neither the common duct nor the gallbladder was found to be enlarged or distended; a probe could be passed easily into the duodenum, and when the duodenum itself was opened no evidence of obstruction was found. The head of the pancreas was thought to be somewhat indurated, and a specimen was removed for biopsy. This was reported as showing no abnormality. Drainage from a T tube placed in the common duct was poor, although as much as 400 cc. was obtained in one 24 hour period. An attempt to study the biliary tree with lipiodol was unsuccessful.



The opaque material flowed easily and directly through the common duct into the duodenum and did not outline the ductal system.

Within the next week the patient began to have chills and fever, and subdiaphragmatic abscess was suspected. Another exploratory operation was done, and again no abnormality was found. It is probable that the chills and fever were due to cholangitis with stasis, and infection, rather than to a liver abscess. After another ten days, the T tube was removed. Because the patient continued to have fever and chills, and was becoming progressively more jaundiced and cachectic, she was transferred to the North Carolina Baptist Hospital.

At that time, the only pertinent physical findings aside from her poor nutritional state, marked icterus and abdominal scars, was enlargement of the liver to four fingers' breadth below the right costal margin. The elevation of the right diaphragm and the evidence of both intraperitoneal and pleural fluids might indicate a primary process in the right upper quadrant, or might be secondary to the surgical procedures already performed.

Although it is unwise to make a positive diagnosis on the basis of negative findings, the impression gained from the history that this case probably represents an obstructive form of jaundice is to some extent confirmed by the absence of any enlargement of the spleen, true liver tenderness, spider angiomas, ascites, evidence of collateral circulation, peripheral edema, or palmar erythema—all or any of which would be more suggestive of hepatitis or cirrhosis.

The accessory laboratory data at the time of admission were helpful. Urobilinogen determinations done on twenty-eight consecutive days were all reported as negative. The urobilinogen in the urine has its origin from the bacterial breakdown of the bilirubin excreted into the intestinal tract. The urobilinogen is re-absorbed in quantities exceeding that which can be excreted in the urine, and a portion is re-excreted in the bile. The repeated absence of urobilinogen in the urine indicates that little or no bile is entering the intestinal tract. When this finding persists as long as two weeks, it is extremely suggestive of complete obstruction, usually by a malignant growth. Gallstones produce an intermittent type of ob-

struction, even though it may be complete for some time.

The marked elevation of the white cell count is rarely seen in infectious or degenerative liver disease, except in cases of subacute or acute yellow atrophy. The duration of illness in the case discussed and the presence of persistent enlargement of the liver are against this possibility. The lowering of the total serum proteins can be explained by the prolonged period of illness and the poor dietary intake. The positive thymol turbidity and cephalin flocculation tests are not inconsistent with the development of some degree of liver damage, probably secondary to the obstruction. The finding of positive serologic tests for syphilis (although these had been negative at the beginning of illness) probably represents a false positive reaction due to the presence of abnormal globulin—a phenomenon infrequently seen in patients with jaundice and liver disease.

Although the stools were described as clay-colored, they were positive for bile. This finding may occur even in a patient with complete obstruction, since the sloughing of bile-stained cells of the intestinal mucosa is often sufficient to produce a positive test in the deeply jaundiced patient.

Two other laboratory findings which are of extreme interest are the high alkaline phosphatase (which occurs most frequently in the presence of obstruction, since the alkaline phosphatase is excreted in the bile) and a prothrombin time which was prolonged only 3-1/2 seconds over the control. We might anticipate that if inflammatory or degenerative liver cell damage had been present over a period of three months, this patient's prothrombin time would have been considerably prolonged. The relatively normal level is indicative of adequate utilization of vitamin K in spite of the degree of jaundice and the duration of her illness.

I will ask Dr. Manson Meads to discuss the significance of the positive blood and bile cultures for *Pseudomonas* and the sensitivity studies which were done in this patient.

The outstanding features of this patient's final hospital course can be summarized as follows: The fever was unaffected by the variety of antibiotic agents used, but when a spontaneous external biliary fistula developed in the second week, the temperature promptly fell to normal levels. The presence

of an external biliary fistula is strong circumstantial evidence that obstruction, with or without infection, is present and persistent. Shortly thereafter, definite signs of peritonitis and free fluid in the abdomen became evident, and paralytic ileus developed. The presence of bile peritonitis is an extremely ominous sign. The irritant and toxic effect of the bile salts produces an outpouring of fluid and makes fluid and acid-base balance a major problem which usually can be overcome only if the cause of the leakage of bile can be corrected surgically. For this reason, in spite of the patient's extremely precarious condition, a final laparotomy was performed and 4,000 cc. of bile was aspirated. Little else could be done, however, and she expired the day following operation.

The evidence is certainly indicative that we are dealing with an instance of profound progressive icterus secondary to an obstruction to the flow of bile. The possibility that this arose outside the liver, either in the pancreas or adjacent nodes or as the result of adhesions, seems fairly well ruled out by the negative findings at the time of operation. The possibility that the obstruction was within the liver and was due to a primary cancer is also remote, since such tumors are relatively rare, particularly in unpigmented races. They produce more pain, are usually associated with ascites, and palpation of the liver reveals evidence of a stony-hard tumor mass. Many such lesions are superimposed on a previous cirrhosis, and neither the past history nor the repeated biopsies and surgical explorations indicate that this disorder was present.

The possibilities of obstruction due to a foreign body (most frequently stone), and such rare possibilities as invasion of the ductal system by *Ascaris* again seem remote. There was no evidence of dilatation of the duct, such as might be anticipated with the passage of a stone into the common duct; the gallbladder was apparently normal, and cholelithiasis in the absence of some previous cholecystitis would again be unusual. The history of cholecystitis with cholecithiasis is usually that of pain and recurring episodes of chills and fever lasting for days; the course is slowly progressive rather than rapidly downhill.

It would seem that the diagnosis must be one which would account for increasing obstruction to the flow of bile proximal to the

common duct. Primary carcinomas of the biliary ducts are uncommon. In 22,000 instances of surgery involving the biliary ducts at the Mayo Clinic only 49 primary biliary malignancies were reported<sup>(1)</sup>. These tumors may be in a large or small duct, and are often multiple. The sequence of events following the development of such a lesion is not unlike that noted in the patient under discussion, and is characterized by deep jaundice, pruritus early in the illness, weight loss, and cachexia. The sites most frequently involved are (1) the common duct, (2) the junction of the cystic, common hepatic, and common ducts, and (3) the junction of the common and hepatic ducts in that order.<sup>(2)</sup>

Since the common duct was found to be patent at operation and the instillation of lipiodol, and since there was no evidence of hydrops of the gallbladder, it is my belief that if a primary ductal carcinoma is found it will not involve either of the more common sites but will be located at or near the junction of the common and hepatic ducts. Pathologic changes will undoubtedly be found in the kidneys, and autopsy may show small abscesses in the liver as well as a perforation in the ductal system which permitted the development of the external biliary fistula. The possibility that the elevated diaphragm and the changes noted at the base of the right lung represent a spread of this malignancy can not be excluded.

*Dr. Cayer's diagnosis:* Primary carcinoma of the biliary system, probably at or near the junction of the common and hepatic ducts.

#### *Anatomic discussion*

*Dr. Thomas N. Lide:* At autopsy the body was found to be severely emaciated, weighing an estimated 90 pounds. The skin showed extreme icterus. No lymph nodes were palpable. The thorax was of normal contour, and the breasts were atrophic. In the abdomen, which was rounded and distended, there were three surgical incisions.

When the abdomen was opened, approximately 2 liters of greenish yellow, fibrin-flecked fluid was found in the peritoneal cavity, and the omentum was bound down by dense adhesions in the pelvis. The peritoneum was opaque, dull, and covered by a thin layer of greenish-yellow fibrin. Numerous fibrinous adhesions bound many loops of the small bowel together. Abdominal viscera were in their usual positions. Four separate



loculated abscesses were found in the right upper quadrant—the largest lying immediately beneath the liver, at the hilus, arising through a fistula in the left lobe of the liver. This fistula, which was easily probed, was approximately 2.5 cm. in depth and measured 4 to 5 mm. in diameter. It emerged from the liver just anterior to the gastrohepatic ligament. Other cavities containing thick, yellow material were found posterior to the gastrohepatic ligament in the lesser peritoneal cavity, and another between the lateral abdominal wall, the right lobe of the liver, and the hepatic flexure. Each of these measured from 3.5 to approximately 6 cm. in its greatest dimension.

The right pleural cavity contained approximately 1 liter of greenish-yellow, slightly cloudy fluid, while the left contained approximately 500 cc. of similar fluid. The pleural surfaces were icteric. The pericardial cavity contained about 30 cc. of fluid, and the pericardium was smooth and glistening. The heart weighed 250 Gm., and showed no lesions. Except for one calcified plaque approximately 1 cm. in diameter on the superior surface of the arch, relatively little atherosclerosis was seen in the aorta. The lungs were both heavy—particularly the lower lobes, which were collapsed, congested and edematous. Dense fibrous adhesions were noted at both apices, and one small fibrotic tubercle was present in the right apex, approximately 0.5 cm. beneath the pleural surface. Anthracosis was prominent throughout both lungs and in the hilar nodes.

No intrinsic abnormalities were noted in the gastrointestinal tract. The spleen weighed 400 Gm., was soft, pinkish in color, and had a dull, opaque capsule which appeared icteric. The liver, which weighed 1900 Gm., was unusually soft, flabby, and friable. There were many dense adhesions over the anterior surface of the liver, and numerous fibrinous adhesions on the inferior surface. The fistula has been previously described. The common bile duct was found not to be dilated but was patent, with no signs nor external evidence of obstruction at any point along its course. The gallbladder was distended, and the wall was thickened and opaque. It contained approximately 50 cc. of watery, mucoid material. There was no evidence of obstruction to be found in the cystic duct.

The common hepatic duct was probed, and a point of obstruction was encountered 2

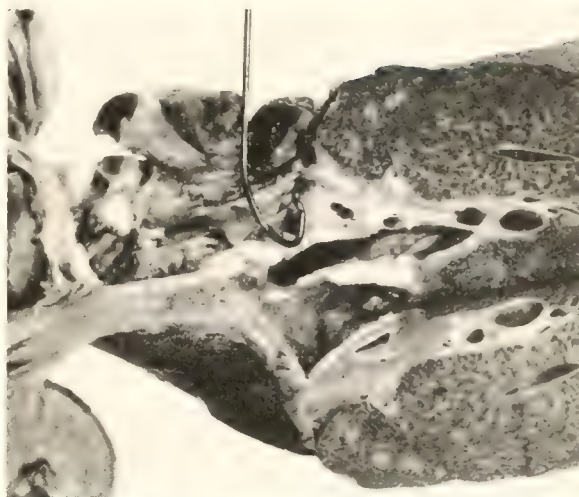


Fig. 1. The roughened area to the left of the retractor represents the point of obstruction by the carcinoma. Dilatation of the bile ducts and alteration of hepatic architecture may be observed.

cm. from the juncture of the right and left hepatic ducts. When the catheter passed through this area, approximately 75 cc. of thick, yellowish-green, cloudy material escaped, allowing a partial collapse of the hilar region of the liver. The duct was opened, and the area of narrowing was found to be represented by a roughened, irregular surface with considerable fibrosis in the adjacent wall. It extended over a segment of approximately 2.5 cm., involved the confluence of the right and left hepatic ducts, and extended approximately 0.5 cm. into the left hepatic duct. The larger ducts within the liver were greatly dilated, some measuring approximately 2 cm. in diameter. The walls were bile-stained, and these ducts contained much greenish-yellow, purulent material. Several necrotic areas were encountered, all connected with small or large bile ducts. These areas measured from 1 to 3 cm. in diameter, and were located for the most part near the hilus. They represented soft, evacuated cavities, surrounded by zones of hyperemia. The parenchyma was dull brownish in color, with red and yellow splotches, and with prominent lobular outlines. The tissue was unusually friable.

No changes were found in the adrenal glands. The kidneys were both somewhat enlarged, weighing approximately 200 Gm. each. The cortex bulged slightly above the incised capsule, and the capsules were slightly thickened and adherent. The cortical tissue was soft, with unusually prominent hy-

peremic markings, and a generally glassy, opaque appearance. The ureters and bladder showed no gross abnormalities. The uterus, tubes, ovaries, and appendix had been removed surgically. No gross abnormalities were seen in the cervix.

Microscopically, the obstructive lesion in the hepatic duct was found to represent a well differentiated adenocarcinoma, which invaded the wall but had not metastasized, so far as could be demonstrated. The large nodes found in the gastrohepatic ligament and about the pancreas were involved in inflammatory changes. The liver was extensively degenerated, showing both peripheral and central necrosis, with much cloudy swelling and degenerative changes in the remaining parenchymal cells. Fibrosis in the periportal spaces was not particularly prominent, but there was some increase in fibrous tissue, indicative of an early biliary cirrhosis. The cavities described in the liver were found to represent necrotic hepatic tissue, and were not surrounded by an inflammatory exudate. The lungs were edematous, and there was atelectasis in the lower lobes. The spleen showed much congestion and hyperplasia of the reticulo-endothelial elements. On the peritoneal surface of the bowel there was an acute inflammatory exudate with fibrin deposition. The changes in the kidneys consisted predominantly of degeneration and cloudy swelling of the tubules, which were in some areas necrotic; many of the tubules contained bile casts.

The finding of the adenocarcinoma of the hepatic duct accounted adequately for the patient's clinical course. The obstruction had been of considerable duration, producing necrosis and degenerative changes throughout the liver and large abscess-like areas of necrosis, which were free of an inflammatory reaction. Another manifestation of obstruction in addition to the hepatic necrosis was the formation of fibrous tissue in moderate degree, producing an obstructive type of biliary cirrhosis. Why the obstruction began early, and why drainage through the T tube was partially successful are questions which we cannot answer satisfactorily. It has been postulated that there may be a neurogenic element, as well as mechanical narrowing of the hepatic ducts produced by invasion of nerve trunks by the carcinoma. In this case tumor tissue was found in the center of one of the larger nerves in the wall of the duct. The fistula originated in the left lobe of the

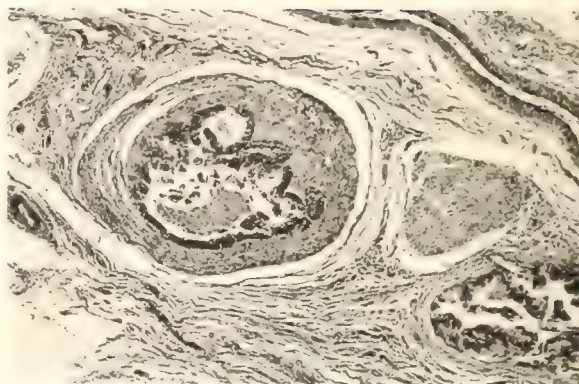


Fig. 2. The tumor invading a nerve trunk in the wall of the hepatic duct.

liver through communication of one of the intrahepatic ducts with the surface. As pressure was built up inside the liver, the drainage occurred through this fistula, which was still present at autopsy.

Atelectasis of the lungs was most likely produced by the large quantities of fluid in the pleural cavities. The enlarged spleen found at autopsy represented a combination of reactive hyperplasia and congestion secondary to portal obstruction. The changes found in the kidneys (swelling and degeneration of the renal tubules with bile casts in the lumen) are quite common in obstructive jaundice, particularly when the obstruction has been prolonged.

#### *Comment*

The rarity of malignant lesions of the extrahepatic bile ducts is well known. Marshall, in an analysis of approximately 22,000 operative procedures performed on the biliary system between 1910 and 1930, at the Mayo Clinic, could find only 49 instances proven by pathologic examination. Between 1939 and 1949, approximately 14,000 operations on the bile ducts were performed at the Mayo Clinic. Among these, 66 instances of malignancy were found<sup>(3)</sup>. The most common sites for the tumors were the juncture of the common, cystic, and hepatic ducts (35 per cent), the common bile duct (32 per cent), the hepatic duct (26 per cent), and the cystic duct (3 per cent).

Analysis of other series<sup>(4,5)</sup> has shown a decrease in the incidence of malignant lesions in the common hepatic duct, which has been found to represent the site of only 4 to 12 per cent of all tumors of the extrahepatic bile ducts. Approximately 40 cases of tumors in this location, not including that of



the patient under discussion, have been reported. Metastases, mainly to the liver and regional lymph nodes, have been reported in approximately 52 per cent of the cases, and metastases to sites as far distant as the mediastinum have been noted. The total tumor mass has in nearly all instances been small and associated with marked dilatation of the intrahepatic bile ducts, with obstructive jaundice and eventual death from hepatic failure. A considerable increase in hepatic fibrous tissue is usual, and occasionally suppurative cholangitis has supervened.

It is of interest that the gallbladder is mentioned specifically in only a few of the recorded cases. In 7 of 9 instances of tumor in the hepatic duct described by Lieber, Stewart and Morgan<sup>(4)</sup>, the gallbladder was found to be distended like that of the patient presented this evening. The etiology of this dilation is not evident on the basis of obstruction in any of the instances cited, and other authors have not offered an explanation. It may be of importance that invasion of nerves in the wall of the duct, which was plainly demonstrated in the case under discussion, was found in 63 per cent of the cases reported by Niebling, Dockerty, and Waugh. They postulated that this nerve invasion might have produced a neurogenic obstruction of the bile ducts in addition to the mechanical stricture. This element of dyskinesia may well apply to the gallbladder inasmuch as there is an intimate relation between the dynamics of the gallbladder, the bile ducts, and the papilla. Such an explanation is postulated in this case.

The correct clinical diagnosis was made in approximately 20 per cent of the cases preoperatively, and in only 36 per cent at surgery. The remainder of the tumors were discovered at autopsy. It has been pointed out that jaundice, pain, and loss of weight were the three essential preliminary symptoms in the vast majority of patients. Pain, which occurred in 64 per cent of the patients, was described as intermittent, not constant; in many instances it subsided with the onset of jaundice. Approximately 80 per cent of the patients lost weight—an average of 26 pounds—in the four to five months prior to the onset of jaundice. Approximately 87 per cent of the patients were jaundiced at the onset of their symptoms. Fever and chills were rare in the early course of the disease, and the leukocyte count was

within the limits of normal until some complicating factor developed.

*Dr. Manson Meads* : *Pseudomonas aeruginosa* was cultured repeatedly from the drainage of the biliary fistula and intermittently from the blood of this patient during her last hospital admission. Bacteremia due to this organism is rare, because of its low degree of pathogenicity for man. When present, bacteremia indicates that the defense mechanisms of the host are markedly reduced.

In the light of the clinical and bacteriologic findings, we felt that an ascending cholangitis might have become established by way of the T tube in the common duct. The possibility of the subsequent development of a subhepatic abscess or multiple liver abscesses in such a situation seemed likely.

The major principles of treatment under these conditions are to establish adequate drainage when possible and to administer large doses of a chemotherapeutic drug. *Ps. aeruginosa* is notoriously difficult to eradicate with the drugs now in clinical use. At present, terramycin is probably the drug of choice, though reports indicate that an occasional infection with this organism has been controlled with polymyxin or streptomycin. The reduced excretion of antibiotic drugs by a damaged liver, the relative resistance of *Ps. aeruginosa* to the available chemotherapeutic drugs, the pathologic process produced by this organism—that is, local necrotic areas with poor blood supply and inefficient phagocytic activity therein—and the underlying obstructive process resulting in poor drainage are major factors which probably led to failure of drug therapy in this patient.

#### *Anatomic diagnoses*

Adenocarcinoma of the common hepatic duct with extension into the left hepatic duct

Biliary obstruction with extensive hepatic necrosis and obstructive biliary cirrhosis

Severe icterus

Biliary fistula and multiple loculated abscesses of the right upper quadrant

Hydrops of the gallbladder

Cholemic nephrosis

Bilateral pleural effusions with atelectasis of the lower lobes

Severe emaciation

### References

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4. Sanford, G. E., and Lowry, C. C.: Carcinoma at the Confluence of the Hepatic Bile Ducts; Case Report, *South. Surg.*, 15:738-746 (Oct.) 1949.
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## Committees and Organizations

### NORTH CAROLINA TUBERCULOSIS ASSOCIATION

#### THE SCORE AGAINST TUBERCULOSIS

JOHN H. SKAVLEM, M.D.

In the United States, one person in five on an average becomes infected with the tubercle bacillus. This ratio varies according to sections and areas of the country. Of these persons infected, one in fifty develops the disease tuberculosis. Among those diseased, one in ten dies.

The tuberculin test is used to find the persons infected, the one in five. The x-ray chest examination is especially valuable to detect the persons diseased, the one in fifty. The physician by his examinations and laboratory tests determines who of the diseased persons needs treatment, what kind and how much, thus striving to cut down the ratio of one in ten for those of the diseased who die.

Prevention is the best care of any disease. For tuberculosis we have methods, thoroughly organized and applied by doctors, nurses, and other health workers, which are very effective. BCG vaccination has been added as a specific measure. It is safe. It is effective to some extent. The immunity conferred to the person vaccinated is not complete or certain. It is not permanent. The procedure is still one to be used within recognized limitations, in selected groups of persons known to have unusually hazardous exposure to the infection, and very carefully controlled in application. It is not yet to be used for the general population.

Treatment of tuberculosis remains anchored to the basic pattern of rest, good nutrition, and a happy mind. This is best afforded in a hospital. The person with tuberculosis must heal himself. It is the body itself that builds up defenses to combat the invading germs and which heals the damaged

tissues. We do not inherit tuberculosis; but we do inherit the ability, in great or less degree, to resist the infection once it becomes established in the body. The resistance naturally given to a person can be maintained and strengthened by healthful living, or dissipated and lost by fatigue, poor nutrition, and intercurrent infections. Our efforts of treatment are directed to help the body destroy the germs and repair the injured parts.

To the fundamental pattern of rest in treatment have recently been added two wonderful scientific developments—new biologic agents and chemical drugs, and perfected chest surgery. The most effective biologic agent is streptomycin. It has had the most thorough chemical, bacteriologic, biologic, animal experimental and clinical testing of any agent yet used in medicine.

The action of streptomycin is to inhibit the growth and multiplication of the tubercle bacilli in the body. The natural forces of resistance in the average patient could withstand and overwhelm a single invasion of one generation of tubercle bacilli. But the rapid multiplication of invading germs from a few hundred to millions or billions in a few days is what kills the patient. Streptomycin cannot kill tubercle bacilli, but it is terrifically effective by its inhibiting action.

Certain drugs are given with streptomycin to increase its therapeutic potency and to reduce the development of drug resistance by the germ. The most effective drug for such purpose now used is para-aminosalicylic acid (PAS). Research in many centers continues in efforts to find agents even more effective than those described. There is definite promise that such discoveries will be made.

Pneumothorax, the oldest form of collapse therapy, is now being used with greater selectivity of cases to be so treated. Pneumoperitoneum is having increasing usage, together with phrenic nerve crush. Surgical collapse of the lung by thoracoplasty continues to offer very effective results for cavity closure in chosen areas. Resection, or removal of diseased lung in measure of segments, lobe or whole lung, has added rehabilitation and life for an increasing number of patients. Perfection of surgical techniques, improvement in anaesthesia, and the use of biologic agents and chemical drugs has made such surgical procedures possible and safe.



Our goal is eradication. Our immediate practical aims are prevention, early diagnosis, and complete cure before destruction of tissue by the disease necessitates the application of procedures that involve permanent loss of function and parts to the body. The score against tuberculosis is turning more and more in favor of the patient and the population in general.

The score has been influenced in large measure by the work of the National Tuberculosis Association and its 3,000 affiliated associations throughout the country. Prevention is emphasized by the associations whose activities are primarily in the fields of education, case finding, rehabilitation, and support of medical research. All work of the associations is financed from Christmas Seal Sale proceeds. Every Christmas Seal purchaser, therefore, in contributing to the tuberculosis control program in this country, is helping to conquer a disease which ranks first among diseases as a cause of death in the age group from 15 to 35.



Tuberculosis control will not be found in the sum of case finding, medical care, and social assistance—it will be found rather in the coordination of these activities, and in the manner in which they are knit together.—Robert J. Anderson, M.D., and Edward T. Blomquist, M.D., Pub. Health Reports, February 2, 1951.

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Despite the encouraging decline of the death rate, and new techniques which should be helpful in the future, tuberculosis is still one of the most important public health problems. It will take many years of undiminished energy to reduce it to an unimportant level.—James E. Perkins, M.D., Tr. 1950 Conf. Pub. Health A. New York City.

## CORRESPONDENCE

To the Editor:

I cannot accept the conclusions of Dr. C. P. Stevick in his article, "Has Malaria Disappeared" (NORTH CAROLINA MEDICAL JOURNAL, September, 1951). I base my disagreement not only on my own personal experience, but also on that of my colleagues, in this county and in adjacent counties, with whom I have discussed this subject.

I feel that the statistical decline of malaria in this area is due to two causes: (1) The criteria of diagnosis required by the State Health Department is too strict, resulting in the rejection of the diagnosis in many cases; (2) because of the refusal of the State Health Department to accept our diagnosis of malaria and of their inability to find the plasmodia in the slides we have mailed to them, the physicians in this area continue to diagnose and treat malaria, but do not report it.

I will admit that the classic picture of malaria—the disease characterized by cyclic chills and fever has declined, but even it has not disappeared. There is, however, a milder form which is still quite prevalent. We see many adults who complain of tiredness, weakness, and vertigo, who do not harbor intestinal parasites, and whose only positive physical or laboratory finding is microcytic anemia. If these patients are given a course of Atabrine or Aralen and no other treatment, they rapidly recover. These same people will develop, postoperatively or postpartum, a cyclic febrile course. Then our hospital technicians report malaria present, although the State Health Department fails to confirm this. These cases respond quickly to antimalarial therapy. Either this is malaria, or it is a new disease for which antimalarial therapy is specific. I consider it malaria.

We also see babies and small children who are irritable and anemic, and who complain of periumbilical pain, loss of appetite, and some diarrhea. They do not have intestinal parasites. Given only a course of Coco-quinine or Atabrine, they rapidly recover. Is this another disease cured by the specific antimalarials? I consider it malaria.

When we have the time to take a thin smear and spend 30 to 45 minutes studying it, occasionally we find what we consider a malarial parasite, either *Plasmodium vivax* or *P. falciparum*. I have been unable to find

the organisms on thick smears. Obviously the technician at the state laboratory cannot spend that much time on every blood smear.

I hope that this letter will not be construed as any criticism of the State Board of Health. I think that they are doing an excellent job. However, sometimes a discrepancy appears between statisticians and the experience of rural physicians. In this case I feel that the statisticians not only in the State Health Department, but also in the Public Health Service have strayed too far from the clinical arena and that further research is needed before they can conclude that malaria is disappearing. A questionnaire sent to all the physicians in this state might throw further light on this question.

I can see three other possibilities to account for the statistical decrease of malaria in North Carolina: (1) that the decrease in reported cases is proportionate to the limitations on diagnosis imposed by the health authorities; (2) that there may be an exoerythrocytic stage of chronic malaria which may produce symptoms and yet evade laboratory diagnosis; (3) that the native population has developed immunity to the native strains of malaria that has altered the disease picture. I cannot agree that malaria is in any way disappearing.

Very truly yours,

LEON J. TAUBENHAUS, M.D.  
Shallotte, N. C.

(We sent Dr. Taubenhause's letter to Dr. Stevick, for comment. His reply follows.—Ed.)

To the Editor:

Dr. Taubenhause is not alone among the practitioners of the state in questioning the conclusion that negative blood smears rule out malaria in persons with clinical symptoms who respond to antimalarial therapy. Scientific proof of the existence of the disease for the purpose of instituting public health control measures does, however, require laboratory evidence.

My article was intended primarily to stimulate interest in the securing of blood smears from all persons having malaria so that the question of its continued existence can be definitely answered, either affirmatively or negatively.

In regard to the criteria of the State Health Department for evaluating reports, it should be pointed out that all report cards and death certificates submitted by physi-

cians are recorded. The chief point of difference appears to be with regard to laboratory interpretation of blood smears suspected of being positive. This problem was anticipated by the National Malaria Society's "Committee on Criteria to Determine When Malaria Ceases to be an Epidemic Disease." The United States Public Health Service was asked to establish a national depository to evaluate doubtful smears. Any slides considered to be positive after examination in a private laboratory and which are submitted to the State Laboratory in the future will be referred to the national depository, or any other qualified laboratory suggested by the attending physician, for study. To insure that such slides receive proper handling, it is suggested that they be carefully labeled and be accompanied by a letter giving the results of the local examination.

Yours sincerely,

C. P. STEVICK, M.D., Director  
Division of Epidemiology  
North Carolina State Board  
of Health

## BULLETIN BOARD

### FIFTH ANNUAL PUBLIC RELATIONS CONFERENCE

The Fifth Annual Public Relations Conference of the State Medical Society is scheduled for Friday, December 14, at the Sir Walter Hotel, in Raleigh. The conference will begin at 2:00 in the afternoon and conclude around 7:00 p.m. The Public Relations Committee has selected four outstanding speakers, each to talk thirty minutes on public relations in his own field.

Speakers for this year's conference will be: Mr. Stanley C. Hope, President, Esso Standard Oil Company, New York; Mr. F. J. Turner, President, Southern Bell Telephone and Telegraph Company, Atlanta; Mr. C. T. Lipscomb, Jr., President, Pepsodent Division of Lever Brothers Company, New York; Mr. J. C. Cowan, Jr., President, Burlington Mills Corporation, Greensboro.

Public Relations Committee members are most anxious to have all state, district, and county society officers, all public relations committee members, and councilors, together with auxiliary officials, attend. In addition, each member of the State Society and Auxiliary is cordially invited. Designated officials of the Auxiliary will act as hostesses.

### NORTH CAROLINA MENTAL HYGIENE INSTITUTE

The second annual Mental Hygiene Institute sponsored by the North Carolina Mental Hygiene Society and the North Carolina Neuropsychiatric Association was held November 14 at the Hotel Sir Walter in Raleigh. The theme of the institute, "Mental Hygiene—At Work—at Home—and in Society," was carried out in the following program:



2:00 p.m.—Symposium: "Mental Hygiene in Industry"—Dr. George Southerland of Duke University, presiding; speakers, Dr. William Line and Dr. John D. Griffin of Canada; discussion leaders, Dr. D. J. Moffie of North Carolina State College and Mr. Forrest Shuford, Commissioner of Labor, Raleigh.

4:00 p.m.—"Mental Health and the Future"—Dr. R. Burke Suitt, Duke Hospital, presiding; speaker, Dr. Lloyd J. Thompson, Bowman Gray School of Medicine; discussion leaders, Dr. Carson Ryan and Dr. W. D. Perry of the University of North Carolina, and Miss B. Haley, Field Secretary of the Parent-Teacher Association.

5:15 p.m.—Panel Discussion: "International Trends in Mental Health"—Moderator, Dr. Vernon Kinross-Wright of Duke Hospital; participants: Dr. Klaus Berblinger, Switzerland; Dr. Bingham Dai, China; Dr. Lorant Forizs, Hungary; Dr. Hans Loewenbach, Germany; Dr. George Southerland, Canada, and Dr. Vernon Kinross-Wright, England.

### NEWS NOTES FROM THE UNIVERSITY OF NORTH CAROLINA SCHOOL OF MEDICINE

Dr. William L. Fleming, professor of preventive medicine at Boston University School of Medicine, has accepted the position as professor of preventive medicine and director of the Medical Outpatient Clinic of the University Hospital. Dr. Fleming received his training at Vanderbilt University, where he taught for two years before going to Johns Hopkins University; from 1939 to 1945 he was professor of syphilology at the University of North Carolina. He is a member of the American Society for Clinical Investigation, the American Venereal Disease Association, the American Social Hygiene Association, and the American Public Health Association, and is a diplomate of the Board of Internal Medicine and of Public Health.

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Dr. George C. Ham has been appointed professor of psychiatry and expects to come to Chapel Hill in December. Dr. Ham received his medical training at the University of Pennsylvania and was a member of the Department of Medicine at the University of Virginia during 1942 and 1943. In World War II he held a special assignment in the Chemical Warfare Service of the War Department. Since 1946 he has been at the Institute for Psychoanalysis in Chicago. He is a diplomate of the Boards of Internal Medicine and Neurology and Psychiatry, and is a member of the American Psychiatric Association, the Psychosomatic Society, the American Society of Clinical Investigation, and the American Federation of Clinical Research.

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Dr. William James Cromartie, associate professor of bacteriology and medicine at the University of Minnesota, has been appointed associate professor in bacteriology and director of the Bacteriological Laboratory in the University Hospital. Dr. Cromartie, a native of Garland, North Carolina, took his medical training at Emory University; he is a diplomate of the American Board of Pathology and of the American Board of Internal Medicine.

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Dr. K. M. Brinkhous, professor of pathology, attended the meeting of the American Association of Blood Banks in Minneapolis on October 24, where he acted as moderator of a roundtable discussion on "Recent Investigations on Blood Preservation."

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Dr. C. Bruce Taylor, associate professor of pathology, presented a paper entitled "Combined Microscopic and Functional Studies on the Cardiac Conduction System of the Dog" at the meeting of the Central Society for Clinical Research in Chicago on November 2.

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Dr. Carl E. Anderson, of the Department of Biological Chemistry, spent the summer at the Oak Ridge National Laboratories on a study of the effect of cholesterol feeding and thyroid suppression (chemical and surgical) on the development of abnormal serum lipoprotein patterns and subsequent arteriosclerotic lesions; this is a joint project with Drs. Robert Furman and Peter Blake of the Vanderbilt University School of Medicine. Dr. Anderson has been granted a traveling contract for periodical visits to Oak Ridge for the continuation of this study.

\* \* \*

Dr. Nathan A. Womack, professor of surgery, spoke to the Sixth District Medical Society at its October meeting on "The Significance of Benign Lesions of the Breast." He was guest speaker at the initial fall meeting of the Clinical-Radiological Conference in Kinston and discussed "Acute Cholecystitis." Dr. Womack also appeared on the program of the Tenth District Medical Society meeting on October 3.

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Dr. Charles H. Burnett, professor of medicine, was guest speaker at the Third District Medical Society meeting in Whiteville on October 31, and on November 13 spoke to the Clinical-Radiological Conference in Kinston on "Modern Concepts in the Treatment of Acute Renal Diseases." He was on the program of the Wilson County Heart Association at its November meeting. Drs. Burnett, Berryhill, and Womack took part in the program for the annual fall meeting of the Fifth District Medical Society in McCain on November 15.

### NORTH CAROLINA STATE BOARD OF MEDICAL EXAMINERS

The next meeting of the North Carolina State Board of Medical Examiners will be held Monday, January 21, 1952. The board will convene at 9 a.m., at which time applicants for licensure by endorsement of credentials will be interviewed.

### MECKLENBURG COUNTY MEDICAL SOCIETY

George T. Pack, M.D., will speak at the regular meeting of the Mecklenburg County Medical Society on Tuesday evening, January 8, 1952, in Hotel Charlotte Ballroom, Charlotte, under the auspices of the Mecklenburg unit of the American Cancer Society.

Dr. Pack is clinical professor of surgery at New York Medical College; associate professor of surgery, Cornell University Medical School; attending surgeon, Memorial Cancer Center and Pack Medical Group, New York, New York. He will speak on "Recent Advances in the Treatment of Cancer."

### FIFTH DISTRICT MEDICAL SOCIETY

The fall meeting of the Fifth District Medical Society was held at the North Carolina Sanatorium at McCain on Thursday afternoon, November 15. The scientific program presented at the afternoon session, was as follows: "The Extension of Surgery in the Treatment of Cancer"—Dr. Nathan A. Womack, Chapel Hill; "The Treatment of Diabetic Acidosis"—Dr. Charles H. Burnett, Chapel Hill;

"The Solitary Rounded Pulmonary Lesion"—Dr. W. C. Sealy, Durham; "Everyday Problems in Skin Disease"—Dr. J. Lamar Callaway, Durham.

The meeting concluded with a business session and dinner.

### SIXTH DISTRICT MEDICAL SOCIETY

The following program was presented at the afternoon session of the Sixth District Medical Society meeting, which was held at Butner on October 10: "The Modern Concept of the Treatment of Threatened Abortion"—Dr. Bayard Carter, Durham; "Surgery of the Spleen"—Dr. Alfred T. Hamilton, Raleigh; "The Non-Surgical Management of Facial Skin Malignancy"—Dr. Joseph M. Hitch, Raleigh; "The Surgical Treatment of the Ruptured Lumbar Intervertebral Disk"—Dr. Walter S. Hunt, Raleigh; "Vomiting in Infancy"—Dr. Charles F. Williams, Raleigh; "Newer Concepts of the Role of Potassium in Disease"—Dr. James W. Woods, Durham; "Common Lesions of the Esophagus"—Dr. Thomas C. Worth, Raleigh; "The Importance of Early Detection of Glaucoma"—Dr. Hubert B. Haywood, Raleigh; "Upper Urinary Tract Obstruction"—Dr. Tom B. Daniel, Raleigh.

During the business session following dinner the society elected the following officers: Dr. Fred G. Patterson of Chapel Hill, president; Dr. James W. Woods, Jr., of Durham, vice president, and Dr. Harold B. Kernodle of Burlington, secretary-treasurer. The meeting concluded with a paper on "The Significance of Benign Lesions of the Breast" by Dr. Nathan A. Womack of Chapel Hill.

### CORRECTION

We regret the inadvertent omission of the name of Dr. Paul F. Whitaker from the fifteenth Board of Medical Examiners, on page 328 of the *Transactions, North Carolina Medical Journal*, August, 1951.

### NEWS NOTES

Dr. B. Bruce Langdon has announced the opening of his office for the practice of urology and urological surgery at Fayetteville.

\* \* \*

Dr. S. Clay Williams of Winston-Salem has opened offices in the Reynolds Building for the practice of internal medicine.

### AMERICAN COLLEGE OF CHEST PHYSICIANS

The Council on Postgraduate Medical Education and the Southern Chapter of the American College of Chest Physicians, with the cooperation of Vanderbilt School of Medicine, will sponsor a postgraduate course in diseases of the chest at Vanderbilt University School of Medicine, Nashville, Tennessee, on January 22-27, 1951.

### AMERICAN SOCIETY FOR THE STUDY OF STERILITY

The American Society for the Study of Sterility has announced the opening of the 1952 contest for the most outstanding contribution to the subject of infertility and sterility. The winner will receive a cash award of \$1,000, and the essay will appear on the program of the 1952 meeting of the society. Essays submitted in this competition must be received not later than March 1, 1952. For full particulars, address the American Society for the Study of Sterility, 20 Magnolia Terrace, Springfield, Massachusetts.

### AMERICAN UROLOGICAL ASSOCIATION

The American Urological Association offers annual awards totaling \$1,000 (first prize of \$500, second prize \$300, and third prize \$200) for essays on the result of some clinical or laboratory research in urology. Competition is limited to urologists who have been in such specific practice for not more than five years, and to men in training to become urologists.

The first prize essay will be included on the program of the forthcoming meeting of the American Urological Association, to be held at the Chalfonte-Haddon Hall, Atlantic City, New Jersey, June 23-26, 1952.

For full particulars write the secretary, Dr. Charles H. de T. Shivers, Boardwalk National Arcade Building, Atlantic City, New Jersey. Essays must be in his hands before February 15, 1952.

### NATIONAL SOCIETY FOR CRIPPLED CHILDREN AND ADULTS

The nation's handicapped constitute a "human uranium supply" to be drawn upon in emergency, and it is up to public and private agencies alike to see that this supply is discovered and put to use.

With this thought in mind, hundreds of delegates who attended the thirtieth annual convention of the National Society for Crippled Children and Adults, the Easter Seal Society, returned to all parts of the United States, October 5, to practice the methods and suggestions they had heard and seen presented by nationally known authorities during the three day session in Chicago's Palmer House.

Davis E. Geiger, Ashland, Kentucky, succeeded Gerald M. Ungaro as president of the organization. William T. Sanger, president of the Medical College of Virginia, Richmond, was chosen president-elect.

### NATIONAL HEALTH COUNCIL

To help communities start new health councils—or make existing councils better—the National Health Council has prepared a new "loan kit" of health promotion literature.

The kit, entitled "Aids to Community Health Planning," may be borrowed for a month at a time, with privilege of renewal, or purchased for \$2.50.

A health council is a planning and coordinating body of voluntary health groups, professional societies, official agencies, and citizens' groups working together for community health. There are 32 state and 1,200 local councils in the country today, the National Health Council reports.

Most of the material is the work of men and women actively engaged in health council work. Sections of the kit are so arranged that they may be parcelled out separately for special use.

For loan or purchase, write: National Health Council, 1790 Broadway, New York 19, New York.

### AMERICAN HEARING SOCIETY

Compiled by the American Hearing Society, a current list of schools, universities, hospitals and local chapters maintaining hearing aid services on a noncommercial basis is now ready for distribution. Free copies may be obtained by writing to the society's national headquarters, 817 14th Street, N. W., Washington 5, D. C.

\* \* \*

Monthly publication of the American Hearing Society, *Hearing News*, is one of 17 magazines which have officially adopted a uniform style for printing the following words frequently used in articles concerning hearing: lipreading, preschool, day school, hard of hearing, hearing aid and speech-reading.



## AMERICAN COMMITTEE ON MATERNAL WELFARE

The fifth American Congress on Obstetrics and Gynecology will be held in Cincinnati, Ohio, March 31 through April 4, 1952, at the Netherland Plaza Hotel.

Sponsored by the American Committee on Maternal Welfare, the Congress will feature a comprehensive five day scientific program covering the medical, nursing, and public health aspects of the maternal care team.

Congress registration fees are \$5.00 for members and \$10.00 for non-members. Further information, registration or reservations can be obtained by writing to Mr. Donald F. Richardson, Executive Secretary, American Committee on Maternal Welfare, 116 South Michigan, Chicago 3, Illinois.

## UNITED CEREBRAL PALSY

The second annual convention of United Cerebral Palsy was held at Philadelphia from November 2 through November 4.

The three day convention included a medical and scientific symposium, an educational symposium and the dedication of the Chestnut Hill Project, the first pilot center established by United Cerebral Palsy in the United States for the research, diagnosis, and treatment of the Cerebral Palsied.

## COMMUNICATION FROM THE CIVIL AERONAUTICS ASSOCIATION

Blood cholinesterase determinations afford a positive means for excluding the possibility of poisoning by organic phosphate insecticides in cases where poisoning by this agent is suspected. The United States Public Health Service has recently informed us that it would make these determinations for us at either of the following two Public Health Service Laboratories:

1. U. S. Public Health Service  
Communicable Disease Center  
Technical Development Services  
P. O. Box 769  
Savannah, Georgia
2. U. S. Public Health Service  
Communicable Disease Center  
Toxicology Laboratory  
P. O. Box 73  
Wenatchee, Washington

The following instructions describe how the blood samples should be taken, prepared, and shipped.

\* \* \*

Blood should be taken by venipuncture from the arm of the subject by the ordinary procedure, using sterile equipment. Heparin is the anticoagulant of choice, and the minimum amount to prevent clotting should be used, so as to dilute the blood sample as little as possible. Merely wetting the syringe with heparin is sufficient. Sodium citrate may be used if heparin is unavailable. The blood should be carefully transferred from the syringe to a clean, dry 15 milliliter graduated centrifuge tube by gentle pressure on the plunger. The needle should be removed, and the aperture of the syringe should be placed in contact with the side of the tube before the blood is forced out. These precautions are necessary to prevent hemolysis. Ten milliliters of blood should be drawn and processed to insure adequate amounts of material for cholinesterase analyses in duplicate to be done.

The collected blood is centrifuged for 15 minutes at 2,000 revolutions per minute, and the plasma is separated. The plasma may now be placed in a

clean, dry test tube of suitable size, closed with a tight-fitting rubber stopper, and plainly labeled. The plasma is now ready for shipment.

The cells are mixed with three times their volume of isotonic saline (0.9 per cent sodium chloride) solution in the same centrifuge tube and again centrifuged at 2,000 revolutions per minute for 15 minutes. After the supernatant fluid has been discarded, the operation is repeated, centrifuging this time for 20 minutes at 2,000 revolutions per minute. (In this final centrifugation the packing of the red cells is a critical point, and the recommended speed and time of centrifugation should be rigidly followed.) The volume of the cells is noted, and then the saline supernatant is removed to the point where the remaining volume of saline and cells is twice the volume of cells alone. The cells are then mixed thoroughly with the remaining saline. This mixture is then transferred to a clean, dry test tube, stoppered with a rubber stopper, and labeled. The red cells are now ready for shipment.

Both plasma and cells must be kept refrigerated during shipment. It has been found convenient to wrap test tubes individually in cotton batting, place them in a tin container of suitable size with a screw or press-on cap, and then place the whole inside a large thermos or picnic jug packed with ice. It is recommended that shipments be made by air express, if feasible, in order to preserve adequate refrigeration for the samples during the entire period of shipment. Shipment may be made by slower forms of transportation provided that the samples are iced periodically.

## DEPARTMENT OF THE ARMY

### Returning Korea Veterans to Receive New Antimalarial Drug

All servicemen returning from Korea will receive a new antimalarial drug, primaquine, the Department of the Army announced recently.

Major General George E. Armstrong, Army Surgeon General, reported that the decision was based on evidence that the drug is entirely safe in the 15 mg. dose, and will cure the Korean type of malaria in most instances.

The move has been endorsed by both the Subcommittee on Malaria of the National Research Council and the Armed Forces Medical Policy Council.

The new procedure will begin as soon as the drug can be made available in the Far East Command. Arrangements for its administration have been completed by the three services. The plan calls for personnel rotated from Korea to receive one dose of 1 Gm. of the malaria suppressant, chloroquine, followed by 15 mg. doses of primaquine for 14 consecutive days. Primaquine will also be used in combination with other antimalarial agents in the treatment of cases of acute malaria.

## VETERANS ADMINISTRATION

American veterans, disabled in military service anywhere in the world after fighting started in Korea, are now eligible under a new law for vocational training on the same basis as World War II veterans.

Under the new law, training may be extended to those veterans, disabled in any part of the world after June 27, 1950, who meet essentially the same requirements as their fellow-veterans of World War II: a discharge under other than dishonorable conditions; a compensable service-connected disability, and a need for training to overcome the handicap of the disability.

\* \* \*

Veterans Administration said it will review all applications of veterans claiming compensation or pension because of multiple sclerosis to determine whether those not now on the compensation roll are entitled to compensation under a new law.

Public Law 174, recently signed by the President, provides that multiple sclerosis, developing to a degree of 10 per cent or more disability within two years after separation from service or July 25, 1947, whichever is the earlier, shall be presumed to be service-connected.

## FEDERAL SECURITY AGENCY

### Public Health Service

#### Regular Corps Examination for Medical Officers

A competitive examination for appointment of medical officers to the Regular Corps of the United States Public Health Service will be held on February 5, 6, and 7, 1952. Examinations will be held at a number of points throughout the United States, located as centrally as possible in relation to the homes of candidates. Applications must be received no later than January 2, 1952.

The Regular Corps is a commissioned officer corps composed of members of various medical and scientific professions, appointed in appropriate categories such as medicine, dentistry, nursing, engineering, and pharmacy.

Application forms and additional information may be obtained by writing to the Surgeon General, United States Public Health Service, Federal Security Agency, Washington 25, D. C. Attention: Division of Commissioned Officers.

Applications received after January 2, 1952, can not be accepted.

\* \* \*

Average length of life in the United States has increased to a record high of nearly 68 years. The new figure, based on final 1949 vital statistics compiled by the Public Health Service, shows a gain of almost half a year over the average lifetime indicated by 1948 death rates.

White women on the average live longer than any other group, outliving white men by more than five years. The average lifetime expected for white women at birth is 71½ years, while the average for white men is 65 years 11 months.

Negroes and other non-white groups have a shorter average life—58½ years for non-white men, and 62 years 11 months for non-white women. Although white persons live longer than non-white, the difference has been sharply reduced. In 1900, whites outlived non-whites by an average of about 15 years, compared to about 8 years in 1949.

While the expectation of life at birth has increased by more than 20 years since the turn of the century, this has been almost entirely due to prolonging the lives of persons who formerly would have died in infancy, childhood, or young adulthood. This has resulted largely from the control of infectious diseases. There has been no significant change in the average lifetime remaining to those who have reached age 65 or 70.

\* \* \*

Many tuberculosis patients are receiving inadequate hospital care because of a serious shortage of nurses in the nation's tuberculosis hospitals and services, Dr. Leonard A. Scheele, Surgeon General of the Public Health Service, Federal Security Agency, said recently.

The problem in tuberculosis hospitals is due in part to the nationwide shortage of nurses, which has resulted in stiff competition for their services, but it is due also to unfavorable working conditions in many tuberculosis hospitals, Dr. Scheele said.

He added that there is only one professional nurse for each 10.6 tuberculosis patients, whereas in general hospitals there is one professional nurse for each 2.5 patients.

\* \* \*

The appointment of Dr. Joseph W. Mountin as chief of the Bureau of State Services, Public Health Service, has been announced by Federal Security Administrator Oscar R. Ewing.

Dr. Mountin succeeds Dr. C. L. Williams, chief of the Bureau for the last five years, whose retirement from the service was announced at the same time. Dr. Mountin assumed office November 1.

Both the outgoing and incoming public health executives have had long careers in the Public Health Service. Dr. Williams' retirement ends nearly 40 years as a commissioned officer of the Service. He received his commission in 1912. Dr. Mountin entered the Service five years later—in 1917. Both attained the rank of Assistant Surgeon General.

## DEPARTMENT OF DEFENSE

### Army Returns Handicapped Veterans to Full Duty Positions

More than 1,500 handicapped veterans of World War II and the fighting in Korea have been returned to full duty positions since November, 1946, the Department of the Army announced recently in connection with the observance of Employ the Physically Handicapped Week.

Amputees and other disabled personnel who have been rehabilitated and reassigned to full-time Army jobs in the United States and overseas include staff officers, administrators, combat training instructors, engineers, postal clerks, typists, finance officers, intelligence experts, small arms repairmen and a host of other critically needed specialists.

### New Jelly Form for Nasal Item

To facilitate intranasal administration of Neo-Synephrine and Thenfafil, the decongestant and antihistaminic preparation, Winthrop-Stearns, Inc., has introduced it in a light water-soluble jelly form. The preparation comes in a ½ ounce collapsible tube from which the patient squeezes a small amount and sniffs it back to cover the intranasal area.

In combination with Thenfafil, potent antihistaminic, it is indicated for the temporary relief of congestion in allergic rhinitis, including hay fever, vasomotor rhinitis and sinusitis.

## Classified Advertisements

Physician 40, Southern Protestant, Category IV, GP experience 10 Surgery USA 4½, desires permanent General Surgical or group association in city ten to fifty thousand with public hospital. Excellent references, early availability. Reply Palmeto Box 790, Raleigh, N. C.

WANTED IMMEDIATELY. General Practitioner to take over long established, large, active general practice in Western North Carolina. 90% Office and Hospital work. Fully equipped office available. Reply to 3-11, P. O. Box 790, Raleigh, N. C.



## BOOK REVIEWS

**Infant Care.** 145 pages. Price, 20 cents. Children Bureau Publication No. 8. Social Security Administration, Federal Security Agency, 1951.

Publication of the ninth edition of *Infant Care*, the government's baby book and its best seller, was announced in October by Dr. Martha M. Eliot, chief of the Children's Bureau, Federal Security Agency.

Sometimes called the "mother's bible," *Infant Care* has been published by the Children's Bureau since 1914, and has grown to a distribution of more than 28,000,000 copies. It has been translated into eight languages. The Government Printing Office, which sells *Infant Care* at 20 cents per copy, has become accustomed through much use, to requests for it from people who ask simply for "the book."

This popular bulletin has undergone major changes since it was first published in 1914. During its lifetime, advances in medicine, science, and in what we know about the emotional development of children have altered much of the philosophy which the book carries. Like its predecessors, this edition of *Infant Care*, is an attempt by the Children's Bureau to bring together the best known and most widely accepted modern ideas about what is good for children from birth to their first birthday.

**Diseases in Old Age: A Clinical and Pathological Study of 7941 Individuals Over 61 Years of Age.** By Robert T. Monroe, M.D., Clinical Associate in Medicine, Harvard Medical School; Senior Associate in Medicine and Head of the Geriatric Clinic, Peter Bent Brigham Hospital. 407 pages. Price, \$5.00. Cambridge, Massachusetts: Harvard University Press, 1951.

Dr. Monroe has made a really valuable contribution to the study of geriatrics. He has approached the subject in a different way from any yet employed, making a statistical study of the patients past 61 years of age who had been admitted to the Peter Bent Brigham Hospital since its opening in March, 1913. (Incidentally, this reviewer wonders why he did not extend his list to take in 59 more elderly patients, since the number 8000 would have been so much easier to handle percentage-wise than 7941.) Only too often statistical studies are dry reading; but Dr. Monroe is blessed—causing his readers to be thrice blessed—with a delightful style and a keen sense of humor, which make his writing as pleasant to read as it is profitable.

The book is truly profitable reading. After an introductory chapter on "General Features of the Group," diseases of the special systems are taken up systematically. A chapter on "Nutritional Disorders and Alcoholism" and another giving a summary of medical findings are included, and the book ends with a long and thoughtful chapter, "The Community Resources Essential for Old People."

All through the book one is impressed by the author's good common sense. For example, in giving the case history of a patient with symptoms of coronary insufficiency who had had repeated electrocardiograms and who died suddenly of coronary occlusion, he said, "If I had listened to the patient instead of the machine, I might still have a live patient." Again: "Play relaxes both body and mind. . . . The therapeutic results of a little normal silliness are great." And again, in speaking of diverticula in the colon, he concludes: "No treatment at all is best, but it is hard to give."

This book can be highly recommended to all physicians either as an introduction to the study of geriatrics or as a valuable addition to a library on the subject.

**The Changing Years.** What to do About the Menopause. By Madeline Gray. 224 pages. Price, \$2.75. Garden City, New York: Doubleday and Company, 1951.

Perhaps the chief reason for the success of Alcoholics Anonymous is that every one of its members knows what it means to be a victim of the condition treated by the organization. This principle accounts for the understanding way in which Madeline Gray deals with the menopause. She has been through it herself, and knows what she is talking about. She is further qualified for the task by long experience in writing. The book was written after four years of extensive reading and conferences with numerous doctors, as well as with her friends who have gone or are going through the menopause. It is written sympathetically, and also sensibly.

From the medical standpoint two statements may be questioned. One is that a synthetic estrogen, such as stilbestrol, though just as effective and far cheaper than the natural estrogens such as premarin, has the disadvantage that "some women can't tolerate it. It makes them frightfully nauseated." This reviewer cannot recall having seen in ten years a single woman nauseated from the enteric-coated pills of stilbestrol, but he is sure that a goodly number would have vomited their heads off had the possibility of nausea been suggested to them. The other questionable statement is found in rule 1 for taking estrogen: "If you are still menstruating regularly . . ." Many, if not most, gynecologists would probably give women who are still menstruating regularly but who ask about taking estrogen the famous advice given by Punch to those about to marry—"Don't." Certainly one of the commonest mistakes made in dealing with women who are "nervous" is to start estrogens before menstruation actually ceases.

It is a pity for such a splendid book to be marred by two pieces of such bad advice. With these exceptions, the book can be heartily recommended by a doctor to his patients who are going through what Mrs. Gray prefers to call "the changing years," rather than use the more ominous term, "the change of life."

**Essays in Surgery.** Presented to W. E. Gallie on the Occasion of his Retirement from the Chair of Surgery in the University of Toronto. Edited by Robert I. Harris and Robert M. James. 584 pages. Price, \$9.50. Toronto, Canada: University of Toronto Press, 1950.

This is a neatly composed, well bound book consisting of 43 papers or essays on clinical and experimental surgery written by the colleagues and pupils of Dr. W. E. Gallie on the occasion of his retirement, after 18 years of service, from the Chair of Surgery at the University of Toronto in 1947.

There are papers on orthopedics, neurosurgery, thoracic surgery, abdominal surgery, urology, vascular surgery, and plastic surgery, as well as an outstanding paper by William Boyd on spread of tumor. Also included is a biographical sketch of Dr. Gallie and lists of his degrees, appointments, and publications.

This book will be good reading for any surgeon, and a must for the host of admirers of William Edward Gallie.

## In Memoriam

OREN MOORE, M.D.  
(1886 — 1951)

We deem it particularly fitting that the Mecklenburg County Medical Society through its Committee on Memorials, pay tribute to Oren Moore, M.D., outstanding medical leader, churchman, and versatile citizen. Because of Oren Moore's unusual personality traits and illustrious leadership, both as a physician and as a citizen, we would like to write into the permanent records: first, his place in medicine; second, his place in the church and community; and third, his diversified interests.

### His Place in Medicine

After attending Davidson College and graduating from the North Carolina Medical College, Dr. Moore inaugurated his medical career by making the highest marks on the examinations given by the North Carolina State Board of Medical Examiners the summer following his graduation. He continued postgraduate study at McGill University, the University of Pennsylvania, and other great institutions of medical learning in this country.

At the very beginning of his medical practice, Dr. Moore had the good fortune to come under the influence of Dr. Charles M. Strong, an ex-president of this Society and an excellent obstetrician and gynecologist, as well as a wise counselor.

Dr. Moore liked to teach, speak and write, and he did all equally well. He was gynecologist, obstetrician and chief at Presbyterian Hospital, Charlotte, for a period of 15 or 20 years. He was also consultant in obstetrics and gynecology to a number of smaller hospitals in North and South Carolina. He believed in and was a leader in organized medicine. His election as president of this society was soon followed by his election as president of the North Carolina State Medical Society. He was a member of the American Medical Association, the Southern Medical Association, and many of the select and exclusive gynecologic and obstetric societies, including the American Association of Obstetricians, Gynecologists and Abdominal Surgeons. At the time of his death he was a member of the executive committee of the latter organization, an honor which stamped him as a national figure.

Oren Moore brought to his patients the latest methods in surgical and medical care that science had to offer, and yet he retained the understanding and sympathetic approach toward his patients which the doctor of the "horse and buggy days" had practiced and which we all urgently need in medicine at this time. Today we hear a great deal about good and poor public relations in medicine. Our departed colleague and friend was the embodiment of good public relations—with regard to patients, doctors, and the public alike. He should have received the title of "Ambassador of Good Will from Organized Medicine to the Public-at-Large." In this area of his life and practice he furnished an example that both young and old in the medical profession can emulate with profit.

### His Place in the Church and Community

Oren Moore inherited the great and honorable heritage of a Christian background, and early connected himself with the Second Presbyterian Church of Charlotte, which is now the Covenant Presbyterian Church. His work in the church was soon recognized by his election as a ruling elder, and he was active in this office at the time of his death. He helped to build two units of what is destined to be one of the truly great churches of the entire Southland.

Dr. Oren Moore was a deeply religious man, but there was no dogmatism in his religion. Instead there was tolerance and mercy, tenderness and justice.

### His Diversified Interests

Oren Moore was also a man of varied interest. He was ever conscious of his duty as a citizen and was a liberal supporter of civic and cultural movements which tended to advance the welfare of the community. He had a keen interest in higher education and gave generously of his time to Davidson College in an official capacity as a trustee and member of the executive committee.

He was a devotee of all sports—football, boxing, and golf receiving the major portion of his attention in this area of his activities.

Thus ended the career of Oren Moore, M.D.—a fine student of medicine, a leader of organized medicine, an honored citizen, and an excellent gynecologist and obstetrician of genuine distinction.

### COMMITTEE ON MEMORIALS

J. Lester Ranson, Chairman  
Robert A. Moore  
Hamilton W. McKay

The Committee on Memorials of the Mecklenburg County Medical Society desires to offer the following resolution:

RESOLVED, that the attached statement be made a part of the permanent records of this Society and be spread upon its minutes;

That a copy of the statement be sent to the family of Doctor Oren Moore;

That a copy be sent to the press;

That a copy be sent to Doctor Warner Hall, one of the ministers of the Covenant Presbyterian Church, an intimate friend of our deceased colleague.

J. Lester Ranson, Chairman  
Robert A. Moore  
Hamilton W. McKay

### Industrial Medical Service

How small industrial plants are bringing their employees the benefits of a well-rounded medical service, such as big industries have established, is discussed by William R. Bond, M.D., clinical director of the A. H. Robins Co., Inc., of Richmond, Virginia, in the September, 1951, issue of *Factory Management and Maintenance* (109:122-125, 1951).

Pictorial charts accompanying the article illustrate for industrial management the workings of two pilot projects, that are seeking by different routes "to get beyond the cigar-box first aid kit to a real plant health service, complete in basic essentials, even if limited in space and staff." These are: (1) the Petrie Plan, Atlanta, Georgia, named for Lester M. Petrie, M.D., industrial hygiene director of the Georgia Public Health Department, under which small industries in the same neighborhood group together to maintain a central clinic, with a part-time physician, aided by a full-time nurse who divides her time between clinic and plants; and (2) the Hartford plan, Hartford, Connecticut, where a full-time physician visits eight small plants daily. Under the latter plan, there is no central clinic, and each plant has a full-time nurse. The doctor is guaranteed an annual salary, toward which participating companies contribute in proportion to the amount of time each uses.

"As opportunities to earn a guaranteed salary in industrial practice grow," Dr. Bond predicts, "the chances are the supply of physicians ready to specialize in this branch of medicine will grow too."



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## PUBLIC HEALTH ASPECTS OF CIVIL DEFENSE

C. P. STEVICK, M.D., M.P.H.\*

and

J. W. R. NORTON, M.D., M.P.H.\*\*

RALEIGH

Civil defense affects the public health program of the state more by a change in the relative importance of the various existing responsibilities than by a change in the basic nature of those responsibilities. War—which requires us to undertake the unpleasant task of civil defense planning—is a movement of humanity back toward its primitive state. Accordingly, public health preparations for the mass destruction of present-day warfare must be considered primarily in terms of comparatively primitive public health needs, such as the prevention of epidemics and the avoidance of lowering food and shelter resources below subsistence levels.

The State Board of Health is working closely with the Medical Society's Committee on Emergency Medical Service, and has assumed the responsibility for preparing the following plans:

- Communicable Disease Control
- Sanitation
- Nutrition
- Registration
- Mortuary Service.

In addition to these functions, certain public health personnel and facilities can be made available as part of the radiological defense service, which will probably be established as a separate part of the Health and Medical Service organization.

### *Communicable Disease Control*

Preparations for communicable disease control include three major activities: (1)

the immunization with selected antigens of appropriate segments of the population; (2) the reduction of reservoirs of infection to as low a level as possible; (3) observation for and prompt reporting of any unusual change in the pattern of communicable diseases.

### *Immunization*

A nationwide immunization policy for civil defense purposes has not yet been prepared. The production of the necessary biologic products must be taken into account in any such plan, and, for this reason, it is probably advisable not to begin mass immunization of new, large population groups until production facilities have been correlated with proposed needs.

For the present time, current public health practice in other states indicates that mass immunization should be confined to infancy and childhood, and should include diphtheria, pertussis, smallpox, and tetanus. There is now rather general acceptance of the principle of using combined antigens for diphtheria, pertussis, and tetanus before the age of 6 months<sup>(1)</sup>. The use of a combined antigen offers a great advantage in its simplicity, especially since the same antigen may be used for booster doses and its administration before the age of 6 months offers at least partial protection against pertussis at the time when this disease is most dangerous. Small infants are also seen more frequently by physicians in their offices and in well-baby clinics than are older children, so that a larger percentage of the child population can be reached.

A practical immunization schedule, incor-

\*Director, Division of Epidemiology, North Carolina State Board of Health.

\*\*State Health Officer.

porating the four immunizing agents previously mentioned, is as follows:

Two months: First injection of diphtheria and tetanus toxoids combined with pertussis vaccine

Three months: Second injection of the triple antigen

Four months: Third injection of the triple antigen

Five months: Smallpox vaccination

Six months: Inspection of smallpox vaccination for take and revaccination if necessary

Twelve months: Booster injection of triple antigen

Six years: Booster injection of triple antigen and revaccination against smallpox.

Immunization of children according to this or an equivalent plan should proceed as rapidly as possible, and should be considered an urgent part of the civil defense program. Inclusion of tetanus in the childhood immunization program in those areas where this has not been the case heretofore is recommended, not only as a peacetime procedure, but also as an advance precaution should tetanus immunization of the entire population be recommended nationally for civil defense purposes.

An increase in emphasis on typhoid fever immunization is not being made by the states at this time. Because of the necessity of repeated annual booster doses, it would appear to be more practical to postpone any increase in mass typhoid immunization until such time as civilian war damage is expected within a period of months. In the meantime, typhoid fever immunization of selected population groups in rural areas where the disease still persists, and of individuals who request it, could be continued as at present. It is recommended that where local health departments conduct field immunization clinics, these plan to provide all routine immunizations rather than that for typhoid fever alone.

The present occasion offers an ideal opportunity for private physicians and public health personnel to promote childhood immunization as a measure essential both in peacetime and as a part of civil defense. The North Carolina diphtheria rate in 1949 was 13.7 cases per 100,000 population as compared to 5.4, or less than half, for the United States as a whole. This discrepancy must be corrected.

### *Reservoirs of infection*

The venereal diseases and tuberculosis are the most important of those infections that continue to spread from a large reservoir of undetected cases. In 1950 there were reported in North Carolina 1,187 cases of primary and secondary syphilis and 3,653 cases of tuberculosis. Our present programs for the control of these diseases must continue to operate at as high a level of efficiency as possible.

In regard to syphilis control, the private practitioners of the state are in a strategic position at this particular time. With greatly simplified treatment methods, it can be safely assumed that a higher percentage of patients will seek private medical care than formerly. Prompt reporting of these cases by physicians and the establishment of a plan for the interview of appropriate individuals so that their contacts can be obtained and investigated, will add greatly to the effectiveness of the present control program.

An excellent example of the possibilities of interviewing private syphilis patients was recently demonstrated<sup>(2)</sup>. A physician arranged to have one of his private patients interviewed by a trained interviewer on the local health department staff. The names of five persons who were found to have syphilis and, in some instances, other venereal infections, were procured. Interviews with these individuals produced the names of 8 persons infected with syphilis and of one infected with chancroid. One of these patients had a second venereal disease and another had two additional infections. Contact interviews and investigations produced 6 more cases of syphilis and mixed venereal infections in this group. The entire series of interviews and contact investigations revealed the following previously unknown infections: 2 cases of primary syphilis, 5 of secondary syphilis, 6 of early latent syphilis, 4 of chancroid, 4 of lymphogranuloma venereum, and 3 of gonorrhea.

If this same type of interviewing and investigation could be arranged by all private physicians with their local health departments, the venereal disease reservoir could be depleted very rapidly, thereby providing the only sound protection against extensive recurrence of venereal diseases in wartime and during the preceding period of mobilization.

The tuberculosis control program of the



Table 1  
Comparison of White and Negro Tuberculosis\*  
Mortality and Morbidity Rates  
North Carolina 1947-49

Year	Morbidity Rates		
	White Rate Per 100,000 Population	Negro Rate Per 100,000 Population	Negro Excess Over White (Percent.)
1947	80.4	137.4	70.9
1948	71.0	124.4	75.2
1949	75.0	120.7	60.9

Year	Mortality Rates		
	White Rate Per 100,000 Population	Negro Rate Per 100,000 Population	Negro Excess Over White (Percent.)
1947	15.4	61.1	296.8
1948	13.0	51.4	295.4
1949	13.6	52.8	288.2

\*All forms.

state is already reaching the maximum limits possible with the facilities available. This effort must be fully maintained. Apparently, the only major possibility for increasing efficiency lies in a more restricted selection of population groups for mass x-ray services. It is surprising to note that in mass surveys carried out in nine representative eastern and western counties and two cities in 1949, in which 165,636 miniature x-ray films were taken, the percentage of Negro films found to be positive was slightly lower than the percentage of positive white films, in spite of the fact that the Negro tuberculosis morbidity, based on reported cases, in recent years has been approximately 70 per cent higher than the white rate (table 1). This seems to indicate that many individuals with suspicious symptoms are not presenting themselves voluntarily for mass survey examination.

In this same connection, it is worth mentioning that in the 15,338 persons x-rayed in 1950 by the mass survey unit on loan to Duke Hospital, there were discovered 9.9 cases of moderately and far advanced tuberculosis per 1000 persons examined. This is almost five times as high as the rate of 2.1 moderately and far advanced cases found among 1000 persons examined in 160,133 non-hospital mass surveys in 1950. Further study of the possibility of increasing hospital surveys as a means of raising the detection rate is definitely indicated.

Ideally, we should greatly increase the tuberculosis control effort for civil defense purposes at once, with complete eradication within a definite period of time as the goal. We have the technical knowledge to make this possible. Such an effort would be costly, but should serious disruption of housing and

nutritional standards occur, the dividends that would be derived from avoiding a rapid rise in the incidence of tuberculosis would more than justify the original investment.

#### *Changes in communicable disease patterns*

Observation for unusual patterns in the incidence of communicable disease is a basic essential in the prevention of widespread outbreaks of naturally occurring diseases and in the early detection of possible attempts at biologic warfare. Among those diseases which at present are not endemic in this state but which could be introduced and spread by existing natural vectors are bubonic plague, various types of arthropod-borne encephalitis, and yellow fever. Air travel makes possible the arrival in this state at any time of persons in the incubation stage of infection from areas where these diseases exist. In recent months we have also been faced with the problem of the commercial importation of rabbits from western states where plague has been demonstrated.

Federal quarantine measures are, of course, in effect, but these cannot be considered to be fully effective at any time, and are subject to repeated breaks during military emergencies.

In regard to agents of biologic warfare, there is no general agreement in published statements<sup>(3)</sup>. The practical possibilities of this type of attack are limited to airborne infection and contamination of common vehicles such as food and water. There is little likelihood that a self-propagating epidemic would be initiated by these or other means. Accordingly, the problem resolves itself into the prompt detection of this type of enemy action, so that prompt counter-measures can be taken.

Accidental laboratory infections have demonstrated the possibility of air transmission of brucellosis, tularemia, Q fever, Rocky Mountain spotted fever, psittacosis, yellow fever, certain of the encephalitides, coccidioidomycosis, and others. Infections borne by water or food include the well known intestinal infections and, possibly, chemicals or biologic toxins.

One aspect of civil defense against biologic warfare is the avoidance of undue alarm in the public mind. This weapon is probably more potent from the psychologic standpoint than any other and, from information that has been made available, is

certainly less important than other forms of warfare.

It is important, therefore, primarily as a protection against natural hazards, and secondarily as a sensible wartime precaution, that all physicians report the presently reportable diseases promptly and also any unusual incidence of other diseases. Investigation of school and industrial absenteeism, as well as hospital admissions, by local health officers, industrial physicians, and private practitioners will help in the early detection of widespread illness. This can probably be done best by delegating certain responsibilities to school, industrial, and hospital personnel, who have been properly instructed as to what information is needed.

On January 1, 1951, the United States Public Health Service put into operation an epidemic reporting service. All states have agreed to participate. Information regarding the increase in the incidence of disease is requested. This reporting program depends entirely upon the efforts of local health departments and private physicians. Local health departments in North Carolina were notified by the State Board of Health of the epidemic reporting service at the time of its inauguration. The attention of health departments and physicians is herewith again called to this important matter.

### *Sanitation*

Civil defense plans relating to sanitation include water supply, sewage disposal, garbage and refuse disposal, milk and food supplies, insect and rodent control, and housing.

#### *Water supply*

Maintenance of a safe water supply in areas of war damage is complicated at best, and is made even more so by the enormously increased water requirements for fire-fighting. Damage to water systems or the emergency use of untreated sources will create many critical problems. Procedures must be developed for making extensive emergency repairs, disinfecting mains, restoring interrupted services, and providing temporary supplies. This can be done by training local water plant operators, sanitary engineers, and others responsible for this work. Emergency auxiliary personnel should be designated and trained. The establishment of a state inventory of disinfecting equipment, important valves, motors, pumps, and piping will facilitate repairs.

During an emergency the local medical authorities should watch closely the status of the water supply so that proper instructions can be relayed to the public.

#### *Sewage and waste disposal*

The proper disposal of sewage and industrial waste is necessary at all times. In damaged areas this problem becomes increasingly important, since the interruption of water service would render flush toilets useless and would require the use of primitive methods of excreta disposal. In addition, the disruption of the processing of industrial waste and of the operation of domestic sewage plants would seriously impair the quality of the raw water available to municipalities. The health hazards associated with such problems are so important that careful supervision by health department personnel will be essential.

Plans for emergency sewage disposal facilities should include provisions for emergency pit or can privies on vacant properties, excrement bags for apartment houses and hotels, privies over man-holes in main sewer lines, pumping units furnishing water to plumbing systems of apartment houses, hotels, and residences to remove waste remaining in flush toilets, and the location of equipment that can be borrowed for use in municipal sewage treatment plants.

Garbage and refuse disposal would be one of the first municipal services to be affected in an emergency. The urgency for resumption of such service immediately will not be great except at evacuation centers, hospitals, and mass feeding stations. Sanitary land fills would constitute the most logical solution to this problem.

#### *Milk supply*

Public health responsibility for maintaining a safe milk supply include the following: (1) redirecting raw milk supplies from disaster areas to undamaged processing plants; (2) assisting in the repair of partially damaged pasteurizing plants; (3) training of auxiliary milk sanitation personnel and key personnel in processing plants; (4) public notification of the status of the milk supply and precautions to be taken; (5) development of emergency standards covering milk production and processing.

#### *Food*

Food sanitation must be considered in the planning of mass feeding facilities, in



the continued operation of existing public eating places under emergency conditions, and in the protection of home food supplies when power failures and other circumstances make adequate refrigeration and cooking difficult or impossible. As in the protection of water and milk supplies, instructions issued directly to the public may constitute one of the most practical means of handling the problem.

Insect and rodent control under disaster conditions is an extremely important problem, not only because of the danger of spreading disease, but because of the destruction of badly needed food and other supplies. Chief reliance would have to be placed on the use of insecticides and rodenticides for immediate results, followed up by the elimination of breeding areas as physical facilities permitted. A state inventory of supplies will be made so that, if necessary, some arrangements can be worked out for storage of minimal quantities.

#### *Housing*

In the establishment of emergency housing facilities by other units of the civil defense organization, the public health unit would be expected to establish and enforce minimal standards where possible, in order to reduce overcrowding and to provide water supplies and waste disposal facilities.

#### *Nutrition*

Responsibilities with regard to nutrition in the civil defense program require action now. The nutritional status of the population should be brought to a high level as soon as possible and maintained.

Studies of the dietary practices of North Carolina school children conducted by the Nutrition Section of the State Board of Health, indicate that some of the poor food customs of past generations still persist in a large part of the population. The result is a nutritional state characterized by reduced physical and mental efficiency and reduced resistance to disease. Such conditions are a definite liability to the defense effort of the nation.

It is necessary that every person be prepared as well as possible in advance of an emergency to withstand periods of deprivation of essential nutrients.

The first objective of the civil defense nutrition program, therefore, is to expand in every way possible current programs for

the education of the public regarding good nutritional practices. Rising prices make it even more important for families to know how to select foods of high nutritive value as economically as possible.

Preparation for an emergency requires the coordination of various agencies and units of the civil defense organization. As part of the allotment of emergency food supplies, the nutritional requirements of each particular population group will have to be considered in order to conserve various items and to guarantee that others meet minimal standards. This requires the establishment of minimum dietary standards for infants, children, adults, laborers, elderly people, and those who are ill. Special attention should continue to be given to prenatal and infant nutrition.

Instructions should be made available early to persons with diabetes and others needing special diets, who may find it necessary to modify their customary diets temporarily.

Plans need to be made with state and county hospitals and other institutions in regard to the kind and amounts of food supplies to be kept on hand to feed the resident population and some additional persons. These plans should include procedures to be followed and the types of menus to be used in the event of power failures and water shortages. Plans are being made for continuing present nutrition programs and for developing all aspects of the work which will provide an efficient nutrition service during emergency periods.

#### *Registration*

The question of registering the entire population is still in the discussion stage. Theoretically, many advantages would be derived during active warfare within the country. The program would be expensive and time-consuming, however, and it is not foreseen as an immediate activity.

Objectives of complete registration are as follows: (1) to issue identification cards or tags for use in handling casualties; (2) to control population movements for evacuation and prevent enemy infiltration and sabotage; (3) to permit the drafting of selected segments of the population for industrial purposes or civil defense assignments; (4) to ration food and clothing; (5)

to supply information to families and for emergency welfare purposes.

Existing proposals call for correlation of this type of registration with existing vital statistics operations, in order to clear deaths, add births and process changes of name following marriage or divorce, and to insure coordination with other health service record-keeping, such as immunization and blood typing, should these two activities be instituted on a mass scale.

#### *Mortuary Service*

Several functions are combined in this particular activity—namely, confirmation of the fact of death, identification of bodies, embalming, burial, recording of data, notification of relatives, and disposal of property. Not all of these activities would be carried out by the public health organization, but the latter would have the responsibility for the general coordination and administrative direction of the over-all program.

A physician should be available to the morgues, except under the most extreme conditions, in order to confirm the fact of death in those instances where casualties are brought directly from a disaster area rather than from a casualty station. Preferably, clearance should be made through a casualty station in all cases except those involving obviously fatal mutilation. Identification tags initiated at the casualty station should show the area where the body was found, other identifying data, and the medical certification of death. Information from these tags should be recorded at the morgue and the tag left attached to the body permanently. Data regarding place of burial or other disposition should, of course, be entered in the morgue records.

Where families were able to take charge, bodies would be removed to private mortuaries for embalming, so far as possible; otherwise, public burial would follow.

Disposal of property would be a police and welfare function, with proper entries in the morgue records.

Casualty figures would have to be compiled and forwarded to the civil defense director.

There are no unfamiliar problems involved in the handling of deaths from communicable disease, chemical poisonings, or fatal radiation exposures, as regards protection

of the mortuary and other personnel, although these matters would require careful attention.

#### *Conclusions*

No fundamental change in the existing public health organization is required for civil defense purposes. Local health departments are expected to function as part of the local medical and health service responsible to the local and state civil defense organization. The staff of the State Board of Health will coordinate public health civil defense activities through its representation in the medical and health service operating under the state director of civil defense. Cooperation of many agencies will be necessary to complete the preparation of plans and conduct actual operations. It is necessary that other units be kept informed as to the public health plans, and that proper coordination with those units be worked out.

Certain aspects of the program—such as immunization, nutrition education, preparation of inventories of sanitation equipment and supplies—can be started immediately if they have not already begun. Other operations will consist of training personnel and, if needed, may include the adding of auxiliary volunteers to existing staffs to work part time on special projects.

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#### *Discussion*

Dr. M. B. Bethel (Charlotte): One subject that I believe was not discussed is the fact that we in public health work are not lining up for enough mutual aid. Suppose there is an atomic bomb disaster in Durham, for instance, or Charlotte, or any other city or community in the state: there would not be many resources to draw on there, and that city would have to rely on aid from its neighbors.

We have taken the precaution in Charlotte to ask the state health officer to come in and take charge of public health procedure in the event of casualties. It would be well indeed to line up sanitation aid particularly, and all the nurses that could be spared from all over the state to go into the casualty areas.

Briefly mentioned by Dr. Stevick, too, is the possibility of biologic warfare. Although military strategists might say that there won't be many bombs wasted on North Carolina—a predominantly and preponderantly rural population—military damage and sabotage could very well be carried out by means of biologic warfare.



## CARDIAC ARREST DURING ANESTHESIA AND SURGICAL OPERATIONS

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Cardiac arrest during the progress of a surgical operation under anesthesia is the most dramatic of all the emergencies with which the surgeon and the anesthetist have to deal. This terrifying accident can occur regardless of the stage of anesthesia, the agent being used, or the type of surgery. A survey of the literature discloses that cardiac arrest, while infrequent, is by no means rare. It is apparently becoming more prevalent, and it is being recognized more promptly and treated more successfully, despite the fact that more operations are being performed on the aged and on patients with diseased hearts.

This is an emergency which requires prompt decision and radical treatment, planned in advance, with full knowledge of the short time available in which to bring about a successful outcome. The average surgeon can effect resumption of cardiac contractions in these cases, provided he is alert to the implications of the situation and psychologically prepared to act promptly and boldly. Wolff<sup>(1)</sup> points out that nowhere is the phrase, "he who hesitates is lost," so apt. Cardiac arrest requires intermittent manual compression, commonly though inaccurately referred to as massaging the heart.

### *The Value of Heart Massage and Artificial Circulation*

Heart massage, according to Gunn<sup>(2)</sup> and others, favors resuscitation: (1) by emptying mechanically the distended cardiac chambers; (2) by creating an artificial circulation; (3) by keeping up the nutrition of the myocardium through the coronary vessels; (4) by manually pumping blood into the arteries and so maintaining the circulation of the medulla and other extremely vulnerable portions of the central nervous system; and (5) by stimulating the nervous energy of the cardiac muscle.

Physiologists have put great emphasis on the value of artificial circulation. Gunn injected a dye in a peripheral vein and detected it in a peripheral artery after a few

compressions of an arrested heart. He concluded that the difficulty is not so much in starting the heart to beating, as in starting it to beating before stoppage of the circulation to the cortical cells renders these cells incapable of recovery. Gunn also concluded that the time limit for revival of the cortical cells can be calculated, not from the start of spontaneous heart beats, but from the time of beginning massage, pointing out the fundamental importance of artificial circulation and making the outlook on the whole question of resuscitation more hopeful. Zezas<sup>(3)</sup> attributes to the artificial circulation the success of heart massage.

Massage, as a practical means of treatment in cases of failure of the pulse and respiration, especially those failures occurring during general anesthesia, is based not only upon a series of experiments in physiological laboratories, but upon clinical evidence as well. This extraordinary power of the heart to regain its function after apparent death is well known to the laboratory worker in the field of heart massage.

### *Early Experimentation*

Experiments in this field were made by Schiff<sup>(4)</sup> as early as 1874. He administered chloroform by inhalation to a number of dogs until the heart ceased to beat, then undertook by artificial respiration and electrical stimulation to restore the cardiac contractions. These measures failed, but massage directly applied restored cardiac action after an interval of 11½ minutes. Tuffier and Hallion<sup>(5)</sup> communicated a similar series confirming this work.

In 1900 Prus<sup>(6)</sup> published the results of experiments performed by him on 100 dogs killed by electricity, by suffocation, and by the administration of chloroform. Heart massage and artificial respiration was started in periods varying from 55 seconds to one hour. Of the dogs in which the heart was arrested by electricity, massage was successful in 14 per cent; while of the others, over 75 per cent were resuscitated. Prus<sup>(6)</sup> concluded that life can be restored even after the heart has ceased to beat for one hour.

Provost and Balleti, from results of animal experimentation, concluded that fibrillary twitchings of the heart muscle are the greatest bar to successful massage, and showed that the longer the lapse of time between the stoppage of the heart and the be-

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ginning of the massage, the greater the probability that these twitchings will appear.

White<sup>(7)</sup>, in 1909, was unable to restore either respiration or circulation by artificial respiration alone, even by inflating the lungs with a bellows after the heart had ceased to beat.

Crile and Dolley<sup>(8)</sup> pointed out the fact that artificial respiration and cardiac massage should be carried out simultaneously.

The first report of massage of the human heart was made in 1898; the first successful case was reported as late as 1902 by Starling and Lane<sup>(9)</sup>.

### *Etiology*

The cause, or causes, of sudden cardiac arrest may be difficult to determine. A number of factors have been charged with precipitating this emergency. The action of anesthetics like cyclopropane, chloroform, and ethyl chloride in sensitizing the heart to epinephrine is generally known. It is an established principle in physiology that hypoxia will sensitize the heart and cause an increase of epinephrine in the blood stream. Excitement also increases the amount of this agent in the circulation. Lee and Downs<sup>(10)</sup> have discussed the effect of hypoxia in producing a hypersensitive carotid sinus reaction, causing inhibition of cardiac activity.

Stimulation of the vagus nerve may inhibit cardiac activity. Abnormal sensitivity to a drug may be the cause, as when sudden cardiac arrest occurs under spinal anesthesia. When a spinal anesthetic extends upwards far enough to paralyze thoracic nerves, breathing is then limited to diaphragmatic contractions; and when the fourth cervical roots are paralyzed, diaphragmatic action ceases. Too deep anesthesia and many other factors may play a part in failure of respiration and in cardiac arrest.

### *Respiration and Circulation*

Thompson and his co-workers<sup>(11)</sup> have shown that in a case of heart arrest some cerebral circulation can be effected solely by artificially ventilating the lungs; whether the circulation thus produced is enough to keep the cortical cells alive is open to question. When heart massage is combined with artificial respiration or aeration of the lungs, however, a condition is created which may offer a surgeon an hour or even

longer in which to effect resuscitation. This is supported by a number of reported cases.

Wolff points out that unquestionably normal activity can be restored after an interval of heart arrest much longer than that over which the central nervous system can withstand anoxia.

The length of time that the central nervous system can be completely deprived of oxygen and still completely recover has never been determined. The highest centers are first damaged, and disintegration proceeds downward as the period of hypoxia is prolonged. The most commonly stated figures, based on experimental and clinical evidence, vary rather widely—from two to seven minutes. In several clinical reports, complete recovery was said to have taken place after 10 to 15 minutes of cardiac arrest. The general opinion of the workers in this field is that, in the excitement, there was either some error in the estimated time, or absolute circulatory arrest was not present throughout the entire period. The duration of cardiac arrest, as logically held by Barber and Madden<sup>(12)</sup>, and others, should be regarded as the "interval between the cessation of the heart beat and the performance of manual cardiac massage", and not until the "restoration of a normal spontaneous cardiac rhythm."

Fisher and Gunn<sup>(13)</sup> advise boldness of procedure if the heart has been stopped three or four minutes, stating that the patient is thereby subjected to no additional risk. Russell judges from experiments, clinical experience, and reports of recoveries after massage that "we are probably safe in assuming that about five minutes loss of circulation is the outside limit that the human brain can withstand and recover completely."

Norbury<sup>(14)</sup> has advocated massage after giving other methods a trial of only two minutes, since he thinks that artificial respiration can be of no use in the absence of circulation.

Weinberger and Gibbon<sup>(15)</sup> have demonstrated experimentally that massage must begin within three and one-half minutes. They showed that interruption of the circulation to the brain for three and one-half minutes or longer resulted in permanent changes in psychic behavior.

Beck and Rand<sup>(16)</sup> believe that the supply of oxygen to the brain must be re-established within three to five minutes. They also state



that restoration of the heart beat is neither difficult nor urgent, so long as the lungs are being well inflated and deflated, and the emptying of the heart by hand is kept up. As long as these two procedures are carried out, the patient is protected and time is not a factor of the first importance. The experience of these observers indicates that the heart beat can be restored in every heart not seriously diseased before the beginning of the operation, provided that oxygen is supplied and the heart is properly massaged.

#### *Treatment*

As soon as cardiac arrest has been determined by the absence of pulsation in large vessels and of registrable blood pressure, a predetermined plan of action must be instituted at once. As suggested by Lahey and Ruzicka<sup>(17)</sup>, a needle not attached to a syringe should be introduced into the heart. Any oscillation of the needle will show the heart to be beating, and in rare instances the insertion of the needle will provide the stimulus to start cardiac action again. Artificial respiration with 100 per cent oxygen should be instituted without delay and kept up continuously, using an anesthetic machine or a simple oxygen tank with a breathing bag and a tight-fitting mask. An endotracheal tube should be inserted whenever available.

#### *Drugs*

The general opinion is that drugs are of little, if any, benefit in resuscitating the heart. Epinephrine by intracardiac injection is first thought of and most frequently used. It is believed that this drug, in some instances at least, may be more harmful than beneficial, as it may produce ventricular fibrillation unless used in small doses. Lahey and others hold that a small dose of epinephrine,  $\frac{1}{2}$  cc. of a 1:1000 dilution, should be injected into the heart; and that 5 cc. of a 1 per cent solution of procaine hydrochloride should be combined with the epinephrine or given as a separate injection. This dose is not to be repeated. A part of the solution may be applied to the surface of the heart when the arrest occurs.

#### *Methods of instituting massage*

If heart failure occurs when an operation is in progress, one can feel for pulsation in the large vessels, and if none is felt massage should be started at once. This problem, simplest during open thoracotomy, is more difficult during an abdominal operation, al-

though in the latter subdiaphragmatic compression may be made at once. This procedure is rarely effective, however, as only the apex of the heart can be reached and lightly compressed against the anterior chest wall, and this is insufficient for emptying the distended cardiac chambers. This method should be dispensed with after a few seconds if there is no response, and the diaphragm should be incised by extending the incision high in the epigastrium, or, if necessary, by making an additional incision. The left lobe of the liver is retracted downward and backward, and the incision in the diaphragm is made anteroposteriorly; the hand is then plunged through and direct massage given.

If neither of the two body cavities is open at the time of failure, the problem is much more complex and the percentage of success is much lowered by the delay in beginning effective massage. This applies to operations on the nose and throat, dilatation and curettage, hemorrhoidectomy, fracture reduction, and so forth.

When heart failure occurs when an abdominal or thoracic operation is not in progress, Johnson and Kirby<sup>(18)</sup> state that the surgeon should be prepared to open the chest with the greatest dispatch, having thought out the quickest and easiest method for use. They insist that the surgeon needs no tools other than gloves and a scalpel. Given these, he should have his hand on the heart in 10 to 15 seconds. Skin antiseptics and sterile drapes are refinements to be utilized when available, but their lack should not be allowed to cost the patient his life.

The incision should be made in the left fourth interspace, from about the edge of the sternum to the posterior axillary line. Since there the bleeding is negligible, the incision can be carried quickly through the chest wall and pleura. The surgeon can then readily put one hand between the fourth and fifth ribs, grasp the heart, and start compressing it rhythmically.

It occurs to me, however, that the general surgeon who is not accustomed to thoracotomy, but is familiar with abdominal surgery, could make a transperitoneal approach through an upper median incision and try subdiaphragmatic massage for a few seconds. If this maneuver proves unsuccessful, he should then depress the left lobe of the liver and incise the diaphragm anteroposteriorly, and have the heart in his hand in a shorter time. This simple technique could

Table 1  
Review of 178 Reported Cases of Heart Failure Subjected to Heart Massage (1896-1950 Inclusive)

Collected by	No. Cases	Hearts not Resuscitated	Hearts Resuscitated	Partial Success	Recovered
Bost 1896-1923	75	36 (48%)	39 (52%)	23 (30%)	16 (21%)
Lee & Downs 1923-1924	24	not reported	not reported	not reported	9 (37%)
Barber & Madden 1924-1945	44	5 (9%)	39 (88%)	16 (36%)	23 (52%)
Bost 1946-1950	35	1 (3%)	34 (97%)	13 (37%)	21 (60%)
<b>Total</b>	<b>178</b>	<b>?</b>	<b>?</b>	<b>?</b>	<b>69 (38%)</b>

Note percentage of improvement from the earliest report (1896) to the latest (1950) inclusive. Reading downward: Hearts not resuscitated 48%, 9%, and 3%; hearts resuscitated 52%, 88%, and 97%; partial success 30%, 36%, and 37%; recovered 21%, 37%, 52%, and 60%.

easily be practiced on a body coming to autopsy. Whatever method is chosen, the surgeon should have a definite plan that can be executed with dispatch.

#### *Rate, technique, and duration of massage*

The rate of massage has generally been held to be half the normal heart rate, 30 to 40 compressions per minute, so as to allow ample time for the heart to fill with blood after each compression. Dumke and Schmidt<sup>(19)</sup> have recently shown in dogs, by means of a meter attached to the thoracic aorta, that a greater blood flow was produced when the heart was compressed at a rapid rate, 60 to 120 times per minute. In all instances the blood flow increased, regardless of whether the heart felt full or empty. As the result of these experiments, these investigators became convinced that one should compress the heart as rapidly as possible, up to 120 times per minute. The fatigue of the operator makes a rate of 120 times per minute impossible for more than a few minutes, whereas he can continue for a long time at 60 to 80 squeezes per minute. If there are two or more operators who can take turns, a faster rate may be constantly maintained.

In the laboratory it was found that some practice was required to produce an effective blood flow by cardiac massage. Dumke and Schmidt<sup>(19)</sup> found that the dog's heart could be compressed most effectively by placing the thumb in front and the fingers behind, or the thumb and index finger in front and the other three fingers behind. They also found out that the blood flow produced by compressing the heart against the anterior wall was only one-half as great as that produced by the preceding method. Only one-fifth as much flow could be produced by compressing the heart through the dia-

phragm, with one hand in the abdomen. The amount of blood flow produced by artificial respiration alone was too small to be measurable. They added that any hope for artificial respiration as an effective method of producing blood flow should be abandoned.

The question of how long cardiac massage should be continued has never been answered, but a clue is given in a case reported by Adams and Hand<sup>(20)</sup>, in which cardiac massage was continued for no less than 20 minutes before a response was obtained; yet the patient recovered. The heart usually responds within a few seconds to a few minutes. Reestablishment of respiration, however, is apt to be much slower, and may not be accomplished for 45 minutes or even an hour.

#### *Ventricular Fibrillation*

Ventricular fibrillation is reported in the literature to be the most frequent complication of cardiac resuscitation. This complication is thought to be due to anoxia, mechanical trauma, electric shock, and drugs which increase the irritability of the heart. Fibrillation apparently occurs most frequently during operations on the pericardium and heart. When it occurs, it should be treated promptly. Lahey and Ruzicka state that they did not encounter the condition in any of their 15 cases, and thought that this fact might be due to their use of procaine in the initial treatment. Burstein<sup>(21)</sup> has shown experimentally and clinically that the local and intravenous use of procaine will protect the heart against irregularities resulting from mechanical stimulation. Beck also advises the use of procaine in the heart and its application to the surface of the fibrillating heart. Beck has recently advocated the use of an electric counter-shock method for treatment of ventricular fibrillation.



Table 2

Results of Heart Massage in 48 (5.5 Per Cent) Cases from Blalock's Group of 870 Cases of Pulmonic Stenosis Treated Surgically (Not Included in Table 1)

Pulmonic Stenosis Cases	No. Cases	Hearts not Resuscitated	Hearts Resuscitated	Partial Success	Recovered
	48	15 (31%)	33 (68%)	11 (23%)	12 (25%)

#### Review of Cases (Tables 1 and 2)

Green<sup>(22)</sup>, in an exhaustive review of the world literature in 1906, was able to collect 40 cases in which manual massage of the heart had been performed. Thirty-six of these had been previously reported. In this series 9 (22 per cent) complete recoveries were obtained, and 8 (20 per cent) partial successes. The latter included those cases in which the pulse and respiration were restored for variable periods of time but ended fatally.

White<sup>(7)</sup>, in 1909, added 10 cases to the 40 reported by Green. In 10 (20 per cent) of these, complete recovery was obtained, and 14 (28 per cent) were partially successful.

I reviewed the literature in 1918<sup>(24)</sup> and again in 1923<sup>(25)</sup>, and collected 25 more cases—including 2 of my own, both partially successful—making a total of 75 cases in which heart massage was employed. Complete recovery occurred in 16 (23 per cent) of the cases; heart action and respiration were restored in 23 (30 per cent), but the patients died in from one-half hour to three days.

Lee and Downs (1924)<sup>(10)</sup> added 24 cases to the 75 I had previously collected and reported, including the presentation of a successful case of their own. This made a grand total of 99 cases reported up to this time, with complete recovery in 25 (25 per cent).

Barber and Madden<sup>(12)</sup>, made a comprehensive review of the world literature from 1924 up to 1946, and collected 44 more cases, with complete recoveries in 23 (52 per cent), and partial recoveries in 16 (36 per cent). This brings the total number of cases reported to 143, 48 (33 per cent) of which were completely successful.

I have again reviewed the literature and have collected 34 more cases, adding a recent completely successful case of my own (here reported). Of these 34 cases, complete recovery was achieved in 21 (60 per cent), and partial in 13 (37 per cent). Only one case (2 per cent) was a failure. These 35 cases, from 1946 to 1950 inclusive, added to Barber and Madden's 143 cases, make a grand total of 178 cases, in 69 (38 per cent)

of which recovery was complete.

This grand total of 178 cases does not include a special group of cases of pulmonic stenosis reported by Cooley and Blalock<sup>(23)</sup>, including 48 cases in which cardiac massage was done. Of these, 21 (43 per cent) were partially successful and 12 (25 per cent) of the patients recovered (table 2).

It is interesting and gratifying to note the improved results in the 35 cases which have occurred during the last five years. These remarkably improved results are apparently due, not so much to our improved method of resuscitation, as to the surgeon's boldness and promptness in establishing artificial circulation by the early institution of heart massage and artificial respiration with 100 per cent oxygen. A study of resuscitated cases points up the superior results obtained when the chest was already open at the time that the heart ceased to beat, so that massage could be started at once. (Witness the 4 completely successful chest cases reported by Johnson and Kirby.)

In considering the grand total of 178 cases subjected to heart massage since it was first successfully employed 48 years ago, it is reasonable to assume that in a large number of cases, heart massage was employed but not reported, since one clinic (the Lahey) reports an average now of 2 cases a year. With this ratio extending throughout various countries, the total number would be very large indeed.

Another point of interest in this connection is the relatively small number of patients who have had the benefit of heart massage, as compared with the number—probably going into the thousands—reported as having “died on the table” or as an “anesthetic death,” who were never given the chance of benefit by heart massage. Nearly every surgeon of broad experience has been confronted with this condition, and, I might add, almost every intern or resident surgeon has seen patients who “went bad under the anesthetic,” were given prolonged artificial respiration and stimulation of various kinds, had the benefit of breathing machines in many cases, and other attempts at resusci-

tation—all without avail—until, finally, without the benefit of heart massage, the case ended with the autopsy report.

In many cases heart massage is frequently not thought of until it is too late to effect a recovery, or not thought of at all. Many surgeons with whom I have talked in this and other states, have told me that they have had cases of heart failure, and a number stated that heart massage never occurred to them. Since most hearts can be resuscitated after a reasonable delay, however, the patient should still have whatever chance of benefit there may be from heart massage. Even though the likelihood is that the function of the cortical cells is already too far destroyed to admit full recovery, massage should be done on the chance of a partial success, returning the patient to his room and his people, if to live only a short time, in place of the shocking report, "died on the table."

#### *Author's Cases*

##### *Case 1<sup>(24)</sup>*

A 24 year old army private was admitted to Dartford War Hospital in October, 1917, with infected shrapnel wounds which resulted in metastatic infection. The patient had been anesthetized and an incision was about to be made when respiration and pulse ceased. The ordinary methods of resuscitation were employed for 10 minutes, following which subdiaphragmatic massage was done for an additional 10 minutes, with no response. The diaphragm was then incised and direct massage begun, and after only 10 or 12 gentle squeezes heart action was resumed after it had been suspended for 25 minutes. After five minutes more respiration was resumed spontaneously. The patient lived for 78 hours, but did not regain consciousness.

##### *Case 2<sup>(25)</sup>*

A 36 year old mother of one child, aged 6, entered Presbyterian Hospital, Charlotte, May 10, 1921, complaining of pain in the lower portion of the abdomen of five years' duration, and irregular menstrual bleeding for the past year. The lower part of the abdomen was tender, the uterus was hard, nodular and three times the normal size, and a small movable mass could be palpated on the right side. The lungs and heart gave no evidence of disease. Urinalysis was negative. A blood count disclosed 8,500 white cells, 4,500,000 red cells, and a hemoglobin of 85 per cent. The patient appeared to be a good surgical risk.

The operation was performed on May 11, 1921. The usual preliminary dose of 16 mg. ( $\frac{1}{4}$  grain) of morphine, and 0.45 mg. (1/150 grain) of atropine, was given. Ether was well received. The uterus with its multiple fibroid tumors, a right ovarian cyst, and the appendix were removed. The operation was concluded and the peritoneum closed in 35 minutes.

Just as the head of the table was elevated from the Trendelenburg position the patient ceased to breathe. The head of the table was at once lowered, and artificial respiration instituted. No pulsation could be felt, and the pupils were dilated and insensitive. Six tenths milligram (1/100 grain) of

atropine and 0.2 Gm. (3 grains) of camphor in oil were given. Neither the anesthetist nor the family physician could detect heart sounds by auscultation. Several sharp percussion blows were made over the cardiac area. After a lapse of three minutes the peritoneal sutures were removed and subdiaphragmatic massage done, causing a slight improvement in the patient's color, but no heart beat or attempt at respiration. The extremities were bandaged, and artificial respiration was continued the whole time.

A waxy pallor now made it appear to all doctors and nurses present that the patient's condition was hopeless. After a lapse of six minutes I cut through the epigastrium and the diaphragm, introduced my hand in the chest, and found the heart arrested in systole. I began gently squeezing the heart at 25 or 30 times per minute. After a few seconds the skin resumed a reddish hue, in a half-minute a slight muscular twitch was felt, and then the heart began beating very feebly and slowly. Within a few seconds a radial pulse could be felt, after cardiac action had been suspended for all of seven minutes. Five minutes later spontaneous respiration began, not more than three or four to the minute, but gradually improving. Oxygen and saline were given, and the incision was closed. The patient returned to the room, apparently in good condition—respiration 20, pulse 100, with good volume. In about one-half hour the patient began to return to a semi-conscious condition, opened eyes, attempted to speak, and moved about in bed. Several hours later the pulse began to accelerate, and muscular twitchings developed in the face and extremities; the pulse was very rapid. Morphine and saline again were given, also Digifolin. The heart rate continued to increase, however, and the end came next morning, 14 hours from the time of resuscitation.

##### *Case 3*

A 56 year old married woman, the mother of four children, was admitted to Mercy Hospital, March 6, 1948, complaining of a gradually developing jaundice, some general itching, slight pain, and a sensation of mild epigastric pressure. She had always been in good health, and had never had an operation or a serious illness. She had had a slight loss of weight.

The history, physical examination, and accessory clinical findings justified a tentative diagnosis of carcinoma, probably of the pancreas. After transfusions and other supportive measures, operation was performed.

The usual preoperative medication, consisting of 20 mg. ( $\frac{1}{2}$  grain) of Pantopon and 0.45 mg. (1/150 grain) of atropine, was given one-half hour before operation. Spinal anesthetic consisted of 150 mg. of Novocaine injected between the third and fourth lumbar vertebrae. The table was kept flat, and the patient's head was elevated with a pillow.

An upper right mid-rectus incision was made. There was a small amount of bile-stained fluid, and gallbladder was only slightly distended. The head of the pancreas was greatly enlarged, and very hard and nodular; hard, nodular areas were felt along portal vessels and common duct, extending up to the liver, and one nodule high on anterior surface of liver was noted. A specimen removed from pancreas proved to be "adenocarcinoma."

After the operation had been in progress for 30 minutes, as the fundus of the gallbladder was being anastomosed to the pyloric end of the stomach, the anesthetist announced without warning, that the patient had no pulse and that respiration had ceased. There was no pulsation of the abdominal aorta; the heart could be felt through the diaphragm, but no beat detected. Artificial respiration with 100 per cent oxygen was given. Subdiaphragmatic massage was done for one minute, without response. After



an interval of two or three minutes an antero-posterior incision was made in the diaphragm, the right hand passed through into the chest, and the heart grasped. It was arrested in diastole. After three or four compressions had been made, a slight contraction was felt. After several more compressions the heart started to beat very feebly but regularly, gradually increasing in force. The temporal pulse could then be felt and facial expression gradually improved. Stimulants were given and artificial respiration was kept up. Spontaneous breathing returned after an interval of eight to ten minutes. The incised diaphragm was closed, and the anastomosis (cholecystogastrostomy) was then completed and the abdominal incision closed.

The patient left the operating room in fair condition, but in semicoma. In the afternoon her mental condition was good. Pulse and blood pressure were normal.

The postoperative course was uneventful, and she was dismissed from the hospital in two weeks in very good condition. The subsequent course was gradually downward as a result of her carcinoma, and she died three months later.

### Comment

Cases 1 and 2 are classed as partial successes. They are fairly typical examples of patients, apparently good risks, who under an anesthetic, for no apparent reason, suddenly stop breathing. The ultimate failure after resuscitation in these 2 cases was due to the irreparable damage done to the cortical cells during the long-suspended circulation. Physiologists agree that three to four minutes of suspended circulation is the limit that the human brain can withstand.

Case 3 is classed as a complete success or recovery, since this death was due to the carcinomatosis. Apparently the heart arrest on the table and the complete resuscitation were in no way connected with the final outcome three months later.

### Conclusions

1. Heart massage is a valuable method, soundly based on both physiologic experiments and clinical work, for re-establishing cardiac action which has suddenly failed during anesthesia and surgery.

2. The possibility of resuscitation bears a definite relationship to the lapse of time between the cessation of the heart beat and the institution of massage; the shorter the interval, the more certain the response.

3. If the abdomen is already open, massage should be instituted at once. Otherwise not more than three and one-half minutes should be consumed in attempting resuscitation by ordinary methods. In case it has been impossible to institute massage within this time, the procedure should not be barred.

4. Subdiaphragmatic massage may rarely suffice, especially in children and if under-

taken promptly; but if only the apex is reached and the heart remains unresponsive after a few attempts at compression, the diaphragm should be promptly incised and direct massage instituted.

5. No surgeon, even though little experienced in the technique, should be content to abandon a patient without giving him the benefit of direct cardiac massage.

6. The need for a more general use of heart massage is great, as it will revive many patients who would otherwise perish. Recent reports of cases in the period 1945-1950 show 60 per cent recovery and 37 per cent partial recovery.

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### Discussion

Dr. William F. Hollister (Southern Pines): Dr. Sparrow and I recently witnessed a demonstration in Dr. Beck's Clinic in Cleveland which brought out a very important factor in cardiac arrest. Often, when the chest has been opened, cardiac massage fails to resuscitate the patient. It is important to know whether the heart stops in systolic arrest or in fibrillation. If it stops in systolic arrest, then massage, in the majority of the cases, will restore

the heart beat to normal rhythm. If the heart stops in fibrillation, it is extremely important that it be converted to systolic arrest before massage is applied. That fact undoubtedly explains the failures in Dr. Bost's chart.

Dr. Beck presented that very dramatically and repeatedly in his laboratory. If a heart is fibrillating—and this was true of the ones we saw—it can not be converted to normal rhythm by massage; if the fibrillation is converted to systolic arrest, then massage can restore the normal rhythm. All surgeons should have some type of cardiac stimulator on hand in the operating room.

## MALIGNANT ADENOMAS OF THE COLON AND RECTUM

(*Adenoma Malignum*)

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The problem of the proper treatment of non-invasive malignant adenomas of the colon and rectum has been of concern to surgeons and pathologists for many years. With each individual case, a decision between local removal or radical operation must be made. The importance of such a decision is evident; the establishment of a permanent colostomy is undesirable if local excision or fulguration will cure the patient. Yet, the loss of a life subsequent to incomplete removal, recurrence, and metastasis is an even greater tragedy. This study is an attempt to evaluate the treatment of these lesions at The New York Hospital over a period of fifteen years.

### *Classification of Adenomas*

In order to present this subject, the various types of adenomas and their relationship to cancer will be briefly considered. These lesions can be divided on etiologic, pathologic, and clinical features into (1) post-inflammatory, or pseudo-polyps, and (2) true adenomas.

#### *Pseudo-polyps*

These polyps develop after certain inflammatory processes, such as tuberculosis, dysentery, severe amebiasis, and most importantly, in chronic ulcerative colitis. Of 1,234 cases of polypoid diseases of all types studied by Buie<sup>(1)</sup>, 110, or 9 per cent, were classified as post-inflammatory. Sloan, Bagen, and Baggenstoss<sup>(2)</sup> found that of 2,000 cases

of chronic ulcerative colitis seen at The Mayo Clinic, 19 per cent developed polyps of the colon or rectum.

The exact relationship between the pseudo-polyps of chronic ulcerative colitis and the development of cancer has not been clarified, despite the fact it has been shown that cancer frequently develops in colons of patients with chronic ulcerative colitis. Five per cent of the 2,000 patients studied by Sloan and others<sup>(2)</sup> developed neoplastic lesions of the colon and rectum. In following 98 patients with chronic ulcerative colitis over a period of years, Cave<sup>(3)</sup> has seen carcinoma develop in 10, or 10.2 per cent. It has been pointed out by Wesson and Bagen<sup>(4)</sup> that the incidence of death from cancer of the large intestine in the general population is only 0.01 per cent, indicating the real danger of malignant degeneration in this disease.

#### *True adenomas*

This division includes all the true neoplastic lesions, and may be properly subdivided.

*Group A (intestinal adenomatosis)* is made up of those cases of multiple lesions of the colon which are definitely hereditary, which appear in young individuals, and which almost invariably develop into cancer at an early age if left to run their natural course. Fifty-five, or 4.5 per cent, of Buie's 1,234 cases fall into this classification<sup>(1)</sup>. Lockhart-Mummery, after careful study of this condition, proposed the term "intestinal adenomatosis," and found evidence that it was a disease transmitted by and attacking both sexes, apparently due to a gene mutation inherited as a Mendelian dominant<sup>(5)</sup>. It is in this type of polypoid diseases that the tendency toward malignant degeneration is most marked. Of the 29 patients studied by Coffey and Bagen, 62 per cent were found to have cancer<sup>(6)</sup>. In Bacon's group of 16 cases of intestinal adenomatosis, 62.5 per cent developed malignant tumors<sup>(7)</sup>.

*Group B* is made up of cases of one or more true adenomas in the colon or rectum. Although sometimes multiple but not so numerous, these are not to be confused with intestinal adenomatosis. One thousand and sixty-five, or 86.5 per cent, of the 1,234 patients with polyps studied by Buie<sup>(1)</sup> were placed in this group. Strictly speaking, fibromas, lipomas, neuromas, carcinoid tumors, and other lesions fall into this classi-

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fication, but they are insignificant in number when compared to the true adenomas.

Adenomas (group B) of the colon and rectum are not rare. Hellwig found these lesions in 9.5 per cent of 1,460 autopsies<sup>(8)</sup>; Swinton and Haug in 7 per cent of 1,843 autopsies<sup>(9)</sup>, and Dukes in 9.4 per cent of 127 autopsies<sup>(10)</sup>. Other authors have given figures ranging from 1.7 per cent to 69 per cent<sup>(11)</sup>. The higher figure was obtained by examination of the intestine with a hand lens, and it is apparent that variation in the care with which examinations are carried out and the criteria for identifying the lesion as an adenoma account for the difference in reported figures. In the clinical experience of those interested in proctologic diseases, the reported incidence of adenomas found on sigmoidoscopic examination has varied from 1.2 per cent to 5 per cent<sup>(12)</sup>. These were selected patients, but at the Chicago Cancer Prevention Clinic, in the course of the routine examination, 2 per cent of 1,031 patients were found to have polyps<sup>(13)</sup>.

#### *The Relationship Between Adenoma and Cancer of the Large Intestine*

##### *Evidence for a relationship*

The incidence of cancer in adenomatous lesions has been studied extensively in both autopsy and surgical material. Helwig found that 7.2 per cent of 139 adenomas in 1,460 autopsies were histologically malignant and that two additional carcinomas, diagnosed only after microscopic examination, apparently arose directly from the mucosa<sup>(8)</sup>. From this evidence he concluded that the great majority of cancers develop in adenomas, but that some may arise independently. Lawrence found that 3.6 per cent of the colonic adenomas and 16 per cent of the rectal adenomas discovered in 7,000 autopsies were malignant<sup>(11c)</sup>. In surgical material, the reported incidence of carcinoma in adenomas has varied from 14 per cent to 77 per cent in different studies<sup>(11d, 12c, 14)</sup>.

The age and sex of the patients and the anatomic location of the adenomas had been offered as indirect evidence of the etiologic relationship between benign adenomas and cancer. Brust found the average age of 143 patients with adenomas to be 48, and the average age of patients with cancer to be 57<sup>(15)</sup>. He reports that the benign and malignant lesions occur in the two sexes in the same 3 to 2 ratio. Helwig found that benign adenomas have a predilection for the same

segments of the intestine as do adenomas with malignant transition and unquestionable carcinoma<sup>(8)</sup>. Swinton and Warren presented similar evidence<sup>(16)</sup>. Susman, however, was unable to find such a correlation<sup>(14c)</sup>, and Klemperer felt that the striking predilection of carcinoma for the sigmoid and rectum was not shared by adenomas<sup>(11a)</sup>.

Another bit of circumstantial evidence to relate benign adenomas and cancer etiologically has been the frequent association of the two in the same intestine. David states that 25 per cent of colons with carcinoma also harbor adenomas<sup>(17)</sup>, while Dukes found the two associated in 75 per cent of 33 consecutive cases of carcinoma<sup>(10)</sup>, and Helwig in 52 per cent of 25 cases<sup>(8)</sup>. Similar studies have yielded figures ranging from 4.7 to 57 per cent<sup>(4, 7)</sup>. This information has, in general, been advanced as suggesting a direct relationship between benign and malignant lesions. Saint, however, believes the association is not very frequent and that, although cancer can undoubtedly arise from malignant changes in adenomas, the majority arise independently<sup>(14b)</sup>.

As direct evidence of the malignant transformation of benign adenomas, a few cases that have been directly observed may be offered. Willis has described the development of carcinomatous change in an adenoma exposed in a colostomy<sup>(18)</sup>. Manheim and Druckerman correlated the clinical and the histologic features of biopsy specimens from a benign adenoma which developed into a pedunculated adenocarcinoma under observation<sup>(19)</sup>. Brust found that of 87 patients with solitary adenomas of the rectum who declined treatment, 4 developed carcinoma at the site of the adenoma within five years, three additional lesions increased in size, and one remained the same<sup>(15)</sup>. Unfortunately, the other 79 patients did not return for examination.

##### *Evidence against a relationship*

On the other hand, Colvert and Brown<sup>(14d)</sup> have presented some evidence against the generally accepted relationship between benign and malignant epithelial lesions of the colon. They compared a group of 43 patients who refused to have adenomas removed with 117 who submitted to removal. In a five to eleven year follow-up period, they found no evidence to support the belief that benign polyps tend to become malignant, and concluded that adenomas are either cancers in

the beginning or tend to become malignant very early.

### *Material for Study*

The lesion in which we are primarily interested is often referred to as adenoma malignum. This is an adenoma which exhibits overgrowing mucosa, and is usually secreting mucus very actively. There may be considerable metaplasia, and when this is noted together with mitotic figures, the appearance of the tumor is indistinguishable from that of cancer. Unless there is definite invasion of the pedicle, such tumors may be removed by local methods and treated as though non-cancerous.

For the purpose of this study, all cases in which the diagnosis of adenoma malignum, malignant polyp, or similar designation was made by histologic examination in the Department of Surgical Pathology at The New York Hospital from 1932 to 1946 were reviewed. The primary pathologic diagnosis was made by Dr. N. Chandler Foot<sup>(20)</sup>, Director of the Department of Surgical Pathology at the time. During this period, adenomas from 564 patients were examined, and 1,547 patients with carcinoma of the colon were admitted to the hospital. In 34 of the 564 adenomas, one of the above diagnoses was made. The fact that only 34 cases were found indicates that the great majority of specimens were diagnosed either as unequivocal carcinoma or as benign adenoma.

### *Clinical data*

The age varied from 29 to 70 years and averaged 56. Seventy per cent of the patients were in the sixth and seventh decade of life. Of the 34 patients, 24, or 70 per cent, were male. Many nationalities, races, and occupations were represented, and these factors do not seem to be significant.

The most frequent symptom was rectal bleeding. Although the bleeding was often attributable to other sources such as hemorrhoids, it did serve to lead to discovery of the adenoma through proctoscopic and roentgen examination. Abdominal cramps or pain, anal discomfort, change in bowel habits, and mucus in the stools were also listed as principal complaints. There is no reliable, typical history for adenoma of the colon. Its discovery depends upon careful and complete examination of all patients with symptoms referable to the lower gastrointestinal tract.

### *Treatment and Results*

A general plan of treatment became established by which conservative measures were reserved for pedunculated adenomas with malignant changes, while radical surgical treatment for sessile malignant adenomas was carried out. The 34 cases have been divided into three groups. The patients in the first group are those with pedunculated adenomas showing malignant change which were treated locally; in the second, those with sessile lesions treated radically; and in the third, those in whom malignant adenomas were associated with carcinoma of the colon.

#### *Group I. Pedunculated adenoma*

In 22 cases, the pedunculated lesions were treated by excision or some less radical procedure than is ordinarily performed for cancer. Although the histologic diagnosis in these cases varied from frank carcinoma in an adenoma to metaplastic adenoma, only those which were regarded as very suggestive (and comment to this fact made in the original report) are included in this study. In other words, they represent more dangerous lesions than the common hyperplastic adenomas. After assurance that the biopsy specimen was indeed from a pedunculated lesion, the pathologist usually recommended local removal and close observation. The procedure was carried out by cautery, snare, biopsy forceps, and excision.

Two patients in this first group were not treated. One refused treatment after the diagnosis of malignant adenoma was established by biopsy. Four years later he had developed a large fungating mass, which was diagnosed after biopsy as precancerous adenoma. This patient still refused treatment and died elsewhere of "myocarditis" eight years after the first biopsy. The second untreated patient had intestinal adenomatosis. On five biopsies, the diagnosis of premalignant adenoma was made three times and adenoma malignum twice. Radical treatment was thought contraindicated because of advanced syphilis of the central nervous system. The patient died elsewhere of the latter disease four and a half years later. At that time a report stated that he had no intestinal symptoms and that the rectal examination was negative.

The remaining 20 patients were followed from eighteen months to twelve years, an average of six and a half years. No reason



was found to regret the decision to remove the pedunculated lesion locally in any of these cases. Two patients subsequently developed benign adenomas two and seven years, respectively, after the first procedure. Four died of other diseases, all apparently without further trouble from lesions of the colon or rectum. Autopsy was made in only one case, and no lesion was discovered in the large intestine of this patient, from whom a malignant adenoma had been removed ten years previously.

#### *Group II. Sessile lesions*

The second group of 5 cases is made up of patients in whom the diagnosis of malignant adenoma was made from the histopathologic examination of a sessile lesion. The growths were usually large, indurated, fixed, often ulcerated, and bleeding. Further surgical treatment was recommended, and the final diagnosis on the excised specimens of 3 patients was adenocarcinoma. At laparotomy one lesion was found inoperable, owing to extensive local spread and distal metastasis. The final case is of considerable interest. Biopsy specimens from this 70 year old male at this hospital and elsewhere were classified as adenoma malignum. Despite roentgen and radium therapy given at another hospital, the tumor grew slowly, invaded the perineum and bladder, and finally, six and one-half years after the first biopsy, caused obstruction and death.

Out of this entire group, one patient is living without recurrence, nine and one-half years after perineal resection, and 4 have died of carcinomatosis from a few months to six and a half years after operation.

#### *Group III. Malignant adenoma associated with cancer*

The final group of 7 cases comprises patients who underwent operation for carcinoma of the colon and rectum, and were found to have malignant adenomas in addition to cancer in the excised segment of intestine. Excluding 2 cases of intestinal adenomatosis, there were 5 which shared nine malignant adenomas between them. Here, of course, the malignant adenoma did not offer a therapeutic problem, but the case does indicate the association of these lesions and carcinoma. It also reveals the need for complete sigmoidoscopic and roentgenologic studies of the large intestine when either a cancer or an adenoma is found, in order to rule out the co-existence of the other.

#### *Intestinal adenomatosis*

Brief mention will be made of 2 cases of intestinal adenomatosis. The first, a 48 year old male, had a series of biopsies over a period of several years, the lesions being diagnosed as metaplastic and precancerous adenomas. Operation was performed only after the diagnosis of malignant adenoma was obtained. The rectum and sigmoid were removed and found to contain three separate carcinomas and many adenomas. This patient died of carcinomatosis five and one-half years after the first biopsy.

The second case is that of a 35 year old female who, in addition to adenocarcinoma of the appendix and the cecum, had malignant adenomas of the splenic flexure and ascending colon and hundreds of benign adenomas. A partial colectomy with ileosigmoidostomy was carried out, followed by perineal resection of the rectum with preservation of the sphincter. Four years later the appearance of adenomas in the sigmoid necessitated the resection of this portion of the colon. The patient is now alive and apparently well, four years after the first operation. Incidentally, her two sons have also been found to have intestinal adenomatosis. These 2 cases serve to emphasize the need for early radical treatment of this disease.

#### *Comment*

The treatment of adenoma malignum at The New York Hospital during this period was similar to that employed in many hospitals. The present study parallels that of Swinton<sup>(14a)</sup>, who reported the material from the Lahey Clinic. In his report of 22 cases of malignant adenomas, 4 patients had further radical operations, because of the advanced state of the tumor. In none of these 4 cases was evidence of cancer found in the second specimen, and no recurrence had been noted in any of the 22 patients at the time of the report. His conclusion is that, although nothing but the most radical treatment is advocated for clinical cancer, there are a few freely movable, histologically malignant lesions which may be safely removed by local excision.

The experience of Scarborough<sup>(21)</sup>, however, illustrates the hazards of such a program. From 182 patients, 13 polypoid lesions were removed, and microscopic examination showed cancer. Nine had radical resection, and three of the specimens showed residual

cancer. Because of the presence of long pedicles and only small areas of cancer, the other 4 patients had local excision only. Of those, 1 had a local recurrence after eight months, and 3 remained well, although at the time of the report the patients had been followed less than two years.

In contrast, 13 of the 14 patients who had malignant adenomas removed locally at the Henry Ford Hospital were alive without recurrence at the end of the fifth year (Colvert and Brown<sup>(14b)</sup>). Klemperer discussed the same problem in 1938 and stated that "the question about which I puzzle is the carcinomatous pedunculated polyp."<sup>(11d)</sup> He concluded with reservations that, judging from experience with 4 cases followed 3 years, early carcinoma in adenomatous polyps may not necessarily require radical resection, but may be excised with the immediately surrounding mucosa. Recently he has stated that the experience of intervening years has not caused him to change this belief<sup>(22)</sup>.

The consensus is that *pedunculated* adenomas with malignant transformation may be treated locally. Experience has shown that the greatest care must be exercised in selecting the cases which are not to undergo radical surgical procedures. The problem requires the closest cooperation between the surgeon and the pathologist. The biopsy specimen must be adequate and carefully taken so as to include, if possible, the pedicle or base of the adenoma. A gross description of the lesion with reference to the size, fixation, ulceration, and the presence or absence of a pedicle is imperative. The pathologist, in turn, is most helpful if he understands the problems which confront the surgeon in his choice of operation.

### Summary

1. A review of the literature concerning adenomas of the colon and rectum and their relation to cancer has been made.

2. Thirty-four cases in which the histologic diagnosis of adenoma malignum, precancerous polyps, or suspiciously metaplastic polyps was established have been reviewed. Twenty-two of these polyps were pedunculated, and were treated locally without cause for regret. Five were sessile lesions. Of these, 3 were treated by radical operations and found on examination to be adenocarcinoma; one was inoperable, and one patient died six and one-half years later

of carcinomatosis. Seven patients were operated upon primarily for an obvious carcinoma of the colon, and malignant adenomas were found in the same segment.

3. From this review it would seem that certain pedunculated lesions exhibiting histologic evidence of malignancy but without invasion of the pedicles can be safely removed locally.

4. Sessile, ulcerated, fixed lesions, however, require radical removal and, in our experience, when the entire tumor is available for examination, it is often found to be frank carcinoma. The importance of careful histopathologic examination and correlation with the gross appearance of the lesion are emphasized.

5. The frequent occurrence of malignant polyps in company with frank carcinoma indicates the need for careful sigmoidoscopic and roentgenologic studies in all patients in whom either lesion is found.

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## ENTEROGENOUS CYSTS OF THE CECUM

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LAURINBURG

An enterogenous cyst of the cecum is a rare clinical entity. I would like to report such a case and then to discuss important aspects of this condition.

### *Case Report*

A 19 year old Indian male was admitted to the Scotland County Memorial Hospital on April 14, 1950, complaining of right lower abdominal pain of eight days' duration. During this time he had been nauseated, but had vomited only once. The pain was persistent in character. He had not had a bowel movement for four days, although he had taken a laxative two days before admission. Three years previously he had been admitted to another hospital with the same complaint. He stated that a mass had been found in the right lower quadrant of his abdomen, but that it disappeared while a physician was palpating it. The remainder of the past history, the family history, and review of systems were negative.

**Physical examination:** The patient was a well-nourished, 19 year old Indian male, somewhat dehydrated, but in no acute distress. His temperature was 100 F., pulse was 80, respirations were 24, and blood pressure was 150 systolic, 70 diastolic. The positive findings were limited to the abdomen, the right side of which was tender and moderately rigid. A mass about 5 inches in diameter was present in the right lower quadrant. It was round, tender, and freely movable.

**Laboratory findings:** A blood count revealed a hemoglobin of 13.5 Gm. (90 per cent), and the white blood count was 20,750 with 79 per cent polymorphonuclear leukocytes, 10 per cent lymphocytes, and 11 per cent eosinophils. A urinalysis was negative. A preoperative diagnosis of an abdominal mass of undetermined origin, probably an appendiceal abscess, was made.

**Operation:** After preoperative parenteral fluids had been administered, an operation was performed on April 15, 1950, under spinal anesthesia. The abdomen was entered through a right pararectus incision. A mass about 5 inches in diameter involving the cecum on its mesial aspect was found in

close proximity to the ileocecal valve. The serosa of the cecum was injected and edematous. Many enlarged regional lymph nodes were present. The appendix appeared only moderately inflamed. The mass was causing partial intestinal obstruction. A resection of the terminal ileum, cecum, ascending colon, and proximal portion of the transverse colon, with an end-to-end anastomosis, was performed. After operation, the specimen was opened and the mass identified as a cyst within the wall of the cecum. The contents were seropurulent in nature. A Miller-Abbott tube was passed, a blood transfusion given, and fluids were administered intravenously. An uneventful convalescence occurred, and the patient was discharged on the tenth postoperative day. He has been seen several times in the outpatient department and is asymptomatic.

**Gross pathology:** "Specimen consists of segment of terminal ileum, cecum, ascending colon, and transverse colon. Segment of ileum is 12 cm. in length and segment of colon 25 cm. in length. Just distal to the ileocecal valve is an empty cavity which must have had a diameter of 8 to 10 cm. This is in an intramural location in the cecum. Its internal surface is covered by mucosa, and its external surface by cecal wall and peritoneum. Cavity has a rather rough, granular, gray-brown lining. Mucosa of the segment of bowel does not appear abnormal. In the mesentery attached to the bowel segment are a number of very large lymph nodes."\*

**Microscopic pathology:** "Sections of that portion of the wall of the cyst projecting into the lumen of the cecum show relatively normal cecal mucosa on the outer surface, and a cyst lining of thin cecal-type mucosa. The latter is partially necrotic superficially, where there is acute inflammatory exudate. Each mucosa has a distinct muscularis mucosae. These are separated from each other by fibrous tissue containing scattered muscle bundles, lacking the arrangement and the bulk of normal muscularis, and mild edema and leukocytic infiltration.

"Sections through that portion of the wall of the cyst in apposition to cecal wall show inflamed lining mucosa of the cyst, with its muscularis mucosae. External to this is submucosa, with varied inflammatory cell infiltration and a few scattered muscle bundles, and then muscularis and subserosa, normal except for inflammatory infiltration."\*

### *Incidence*

According to Rea<sup>(5)</sup> enterogenous cysts are more prone to occur in females than in males, the ratio being 3 to 2. The youngest patient that I have found reported in the literature (Strode and Fennel<sup>(6)</sup>) was an infant two days old, while the oldest (reported by Drennan<sup>(2)</sup>) was aged 23 years.

### *Location*

According to Lewis and Thyng<sup>(1)</sup>, "cysts lined by intestinal epithelium wherever found in the abdomen must be derived from the gut. These are described as developmental enterogenous cysts." These cysts may develop in any part of the intestinal tract, but the site of predilection is in the terminal ileum and cecum. No adequate explanation for this fact has been given. In 1934

\*Read before the Section on Surgery, Medical Society of the State of North Carolina, Pinehurst, May 9, 1951.

From the Department of Surgery, Scotland County Memorial Hospital, Laurinburg, North Carolina.

\*Reported by Dr. K. M. Brinkhous, University of North Carolina School of Medicine, Chapel Hill.

Hughes-Jones<sup>(4)</sup> reported 55 cases from the literature, 85 per cent of which occurred in the terminal ileum or cecum.

### *Mode of Origin*

Several theories have been offered as to the etiology of these cysts. Drennan<sup>(2)</sup> believes that both cysts and diverticula of the intestines result from the growth of a bud or from a prolongation of epithelium which has pushed out into the mesenchyme. If an opening into the intestine occurs, a diverticulum results; if the bud becomes separate, a cyst is formed.

Lewis and Thyng<sup>(1)</sup> found that in the pig, rabbit, and human embryo diverticula of the small intestine occurred often and arose from the canalization of solid bud-like outgrowths from the bowel. Occasionally these diverticula become sequestered from the bowel and form cysts.

Another theory is that these cysts may develop in connection with some unobliterated portion of the vitello-intestinal tract<sup>(3)</sup>. A fibrous vestige of this tract may exist, and a cyst is likely to form along some part of its course.

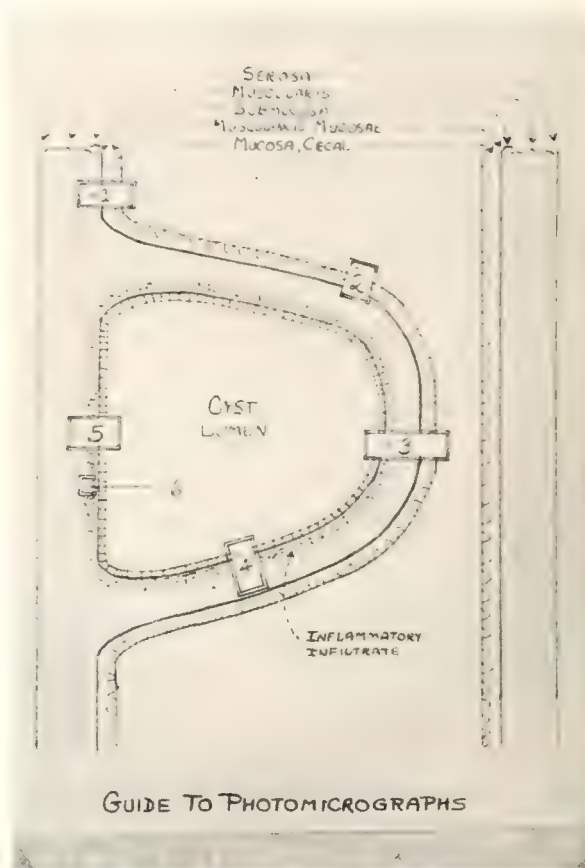
### *Pathology*

Grossly, these cysts may be single or multiple. They range in size from microscopic structures to 20 cm. in diameter. They are unilocular, and their location may be submucous, intramural, or subserous. The cyst usually has a glistening, bluish membrane. The contents may be mucilaginous, gelatinous, serous, seropurulent, or sanguineous in nature, and colorless, yellow, or brown in appearance.

Microscopically, the cyst wall is usually found to be composed of all of the layers of the intestinal wall. However, any of the layers may be absent. The typical cyst is lined by a single layer of epithelium, which is usually tall and columnar in nature. Under the epithelium is the submucosa, and under this is a layer of circular and a layer of longitudinal muscle. Occasionally, villous folds are seen. Photomicrographs of a specimen removed at operation illustrate these points.

### *Diagnosis*

According to available literature no enterogenous cyst has been diagnosed preoperatively. The diagnosis is a difficult one and can be made only by keeping the entity in mind. When a mass is palpable in



A lateral view of the cecum showing the cyst projecting into the cecal lumen. The numbers serve as a guide to the microscopic sections.

the lower right quadrant of the abdomen, an enterogenous cyst must be considered, along with an appendiceal abscess, an intussusception, regional ileitis, ovarian cyst, or granuloma of the ileum. Roentgen studies are of little aid, because these cysts have no connection with the lumen of the bowel. Roentgenograms, however, may show evidence of compression on the intestinal lumen.

### *Symptoms and Signs*

Although a diversity of symptoms may occur, the usual presenting complaint is persistent pain in the right lower quadrant of the abdomen. The persistence of the pain is due to tension within the cyst. On the other hand, the pain may be intermittent in character, if partial or complete intestinal obstruction exists. The cyst may act as the starting point of an intussusception, with its characteristic symptoms.

The patient, as a rule, appears acutely ill. The temperature is elevated, the pulse rate



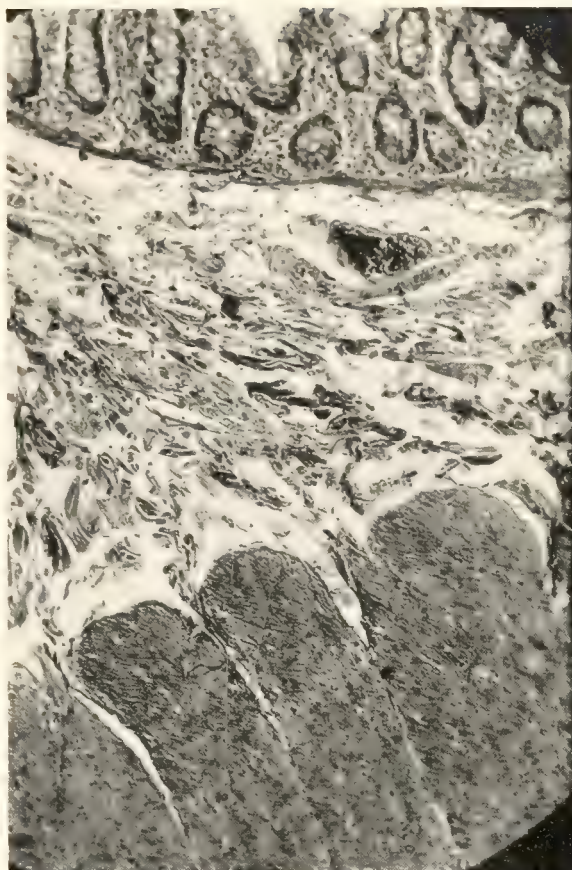


Fig. 1. Photomicrograph of normal cecal wall.

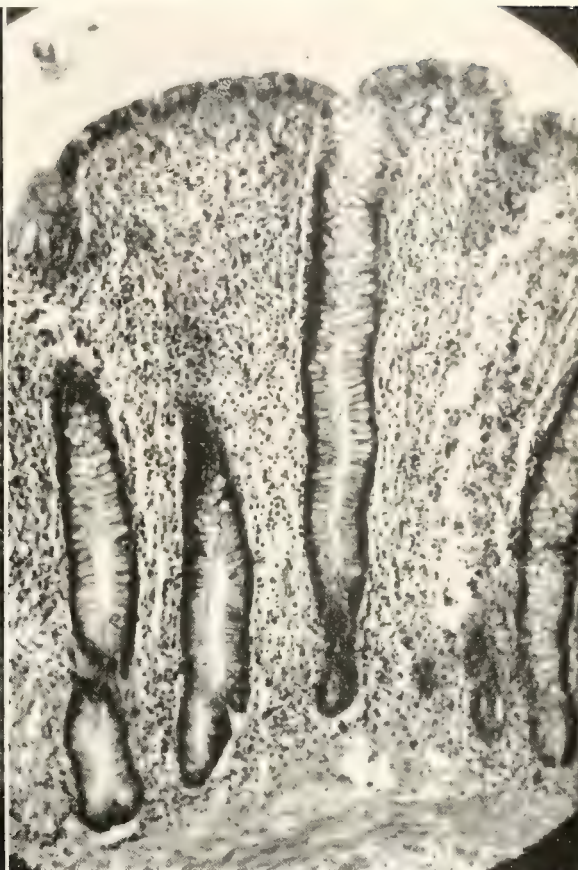


Fig. 2. Photomicrograph showing relatively normal cecal mucosa on outer surface of cyst.

accelerated, and a marked leukocytosis is present. Physical examination reveals marked tenderness and muscle spasm in the right lower quadrant of the abdomen. The outstanding physical sign, however, is a tense, globular, tender, mobile mass in the lower right portion of the abdomen. If a complication, such as intestinal obstruction or intussusception has occurred, the physical signs of the individual complication will be found.

#### *Treatment*

Although surgery is always necessary in the treatment of an enterogenous cyst, astute judgment as to the proper procedure is required. One of the following surgical procedures is usually employed: (1) intestinal resection with anastomosis; (2) enucleation of the cyst; (3) evacuation of the cyst; (4) marsupialization of the cyst.

As mentioned previously, it is very difficult to make an accurate preoperative diagnosis in these cases, and consequently the patient is not adequately prepared for in-



Fig. 3. Photomicrograph of cyst wall (part projecting into cecal lumen).

testinal resection. Add to this fact that these patients are acutely ill, and it can be seen why a resection is difficult and the mortality high.

Since an enterogenous cyst is a part of the intestinal wall, it is practically impossible to enucleate the cyst without actually





Fig. 4. Photomicrograph of cyst lining, showing inflamed, thin mucosa with its muscularis mucosae.

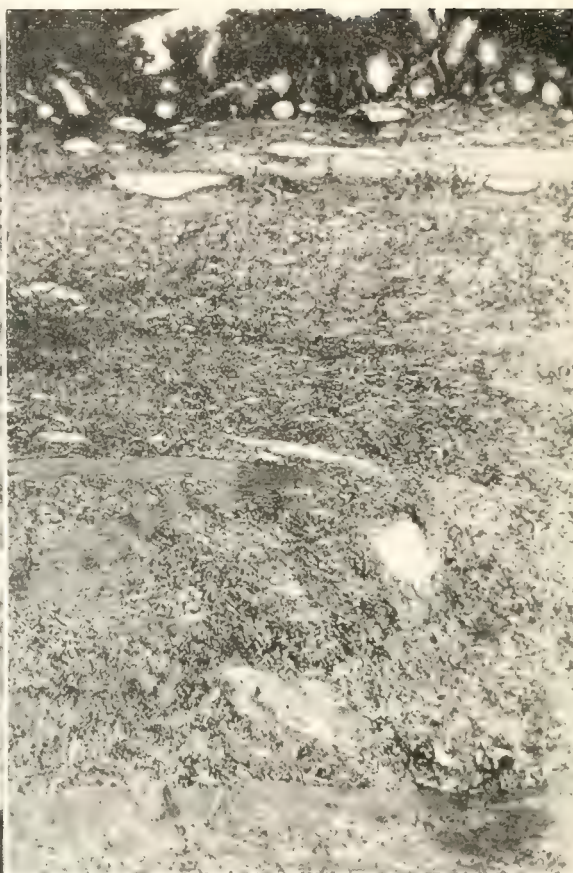


Fig. 5. Photomicrograph of cyst wall (portion in apposition to cecal wall).

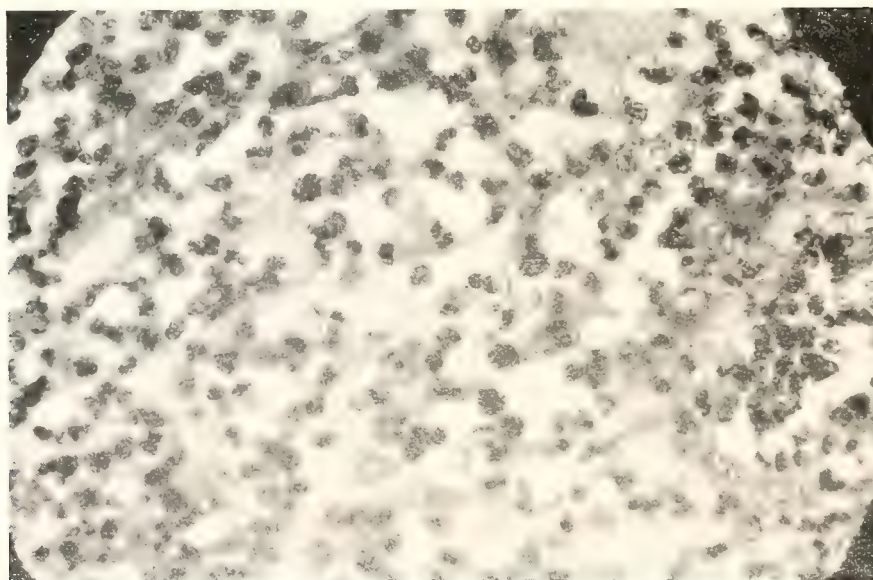


Fig. 6. Inflammatory infiltrate of section depicted in Fig. 5.



entering the intestinal lumen. Enucleation is thus a hazardous procedure.

Evacuation of the cyst is unsatisfactory, as refilling always occurs and there is danger of leakage into the peritoneal cavity.

Marsupialization is probably the most popular procedure. It relieves the symptoms, and the possibility of a primary cure is great. If a primary cure is not achieved, a secondary procedure can be performed at a later date when the patient is in much better condition for major surgery.

### Summary

1. A case of enterogenous cyst of the cecum is reported.
2. A discussion of important aspects of this clinical condition is given.

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### Discussion

Dr. C. E. Gardner, Jr. (Durham): I think the most important thing to remember is that an enterogenous cyst and that part of the intestine from which it arises have a common wall and a common blood supply, and that it is usually impossible to remove the cyst without also removing the bowel. The preferred treatment is, thus, an intestinal resection, which is what Dr. Patterson did.

If the cyst arises in an area where resection is hazardous, as in the duodenum near the ampulla of Vater, the cyst might be managed by excising a portion of the common wall between it and the bowel, so that it can be drained internally into the bowel.

**Precedence When Several Physicians are Summoned.**—When several physicians have been summoned in a case of sudden illness or of accident, the first to arrive should be considered the physician in charge. However, as soon as is practicable, or on the arrival of the acknowledged personal or family physician, the first physician should withdraw. Should the patient, his family or his responsible friend wish some one other than he who has been in charge of the case, the patient or his representative should advise the personal or family physician of his desire. When, because of sudden illness or accident, a patient is taken to a hospital without the knowledge of the physician who is known to be the personal or family physician, the patient should be returned to the care of the personal or family physician as soon as is feasible.

From the **Principles of Medical Ethics** of the American Medical Association.

## MYOSITIS OSSIFICANS WITH REPORT OF A CASE IN PARAVERTEBRAL MUSCLE

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and

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DURHAM

The term "myositis ossificans" brings to mind classic descriptions of the "rider's bone" of cavalymen and the "drill bone" of soldiers who serve in the infantry. In civilian practice, this condition is found most frequently in young football players, basketball players, and, to a lesser extent, in miners.

Since Patin's first report in 1692, numerous cases of myositis ossificans have been recorded, and yet today, even with widespread use of the roentgenogram and other modern diagnostic aids, the condition is infrequently recognized and imperfectly understood.

Myositis ossificans is characterized by aberrant bony growth within skeletal muscle. It is usually divided into traumatic and progressive types. In this paper the discussion is limited to the traumatic type.

The primary lesion actually involves the fascial connective tissue; changes in the muscle are secondary and degenerative in character. Shipley<sup>(1)</sup> divides myositis ossificans into three anatomic types: (1) involvement of bone without extension into muscle; (2) involvement of muscle and adjacent bone; and (3) involvement of muscle without attachment to bone. The second type is most frequently seen.

### Etiology

Among the interesting theories which have been advanced to explain the pathogenesis of myositis ossificans are these:

(1) That there is a transformation of organized hemorrhage into cartilage and bone;

(2) That trauma stimulates proliferation of aberrant sesamoid bone tissue;

(3) That detached pieces of periosteum grow into bone;

(4) That there occurs an escape of synovial tissue and fluid into periarticular tissue, followed by organization;

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(5) That there is metaplasia of intramuscular connective tissue to bone;

(6) That the process results from a combination of metaplasia and periosteal proliferation.

Hirsch and Morgan<sup>(2)</sup> believe that an individual diathesis or dyscrasia must be involved. In a study of various tendons of 25 cadavers they demonstrated that fibrocartilage is distributed as a normal tissue component in areas where traumatic ossification occurs. They think that this fibrocartilage is probably the matrix from which traumatic ossification develops.

Schwartz<sup>(3)</sup> reported a case of circumscribed ossification in the soft tissues of the abdominal wall following prostatectomy. He believes that in such cases cells from the bladder mucosa may be implanted, and that after injury to the pubic periosteum, metaplasia of connective tissue occurs, with resulting new bone formation. It has been shown experimentally that apparently the presence of bladder epithelium or epithelium from the kidney pelvis or ureter greatly enhances the process of ossification.

Hirsch and Riley<sup>(4)</sup> compared the pathologic processes of spondylitis deformans and of traumatic myositis ossificans. They proposed that physiologic endochondral ossification occurs in each disease: in the former, in the fibrocartilage of ligaments, as a result of the trauma of stress; in the latter, in the fibrocartilage of tendons, as the result of a single severe injury or repeated minor injury.

Geschickter and Copeland<sup>(5)</sup> state that the source of the new bone is fibrous strands in the muscle, or tags of precartilaginous embryonic connective tissue (or blastema) displaced from the primitive periosteum. Some new bone apparently arises from periosteal stripping (by injury), with direct ossification of the membranous type. Other new bone seems to be derived from cartilage, which must involve blastemal tissue. It also seems to be important that a hematoma be present in order for ossification to occur.

Recent experimental work indicates that the stimulation to ossification is chemical in nature, increased calcium deposition taking place locally in the presence of an injured blood supply. However, the systemic blood calcium, phosphorus, and phosphatase levels are normal in myositis ossificans, and there has been no evidence that hormonal imbalance is in any way responsible for this

condition. The disease usually occurs in healthy, well developed people. An hereditary predisposition has been suggested as an etiologic factor, but this hypothesis has never been proved.

A frequent exciting factor is trauma, although in a large proportion of the cases a history of specific injury is not obtained. Certainly the aberrant osseous formation is not a normal reparative process or it would be seen much more frequently following fracture. There must be an obscure growth-regulating factor which plays a significant role in the etiology of this condition.

### *Pathology*

When examined at the operating table, the bony growth is usually surrounded by a gelatinous substance which appears to be the result of muscle degeneration. A fibrous capsule usually lies beneath this material. Irregularly distributed bands of connective tissue radiate from the capsule. Cystic changes are sometimes seen; when they are present, the gross specimen may be confused very easily with a giant cell tumor<sup>(6)</sup>.

Geschickter and Maseritz<sup>(6)</sup> studied 25 cases of traumatic myositis ossificans and classified the ossification histologically as (1) typical, (2) cartilaginous, (3) angiomatous, (4) myxomatous, and (5) malignant.

In the earliest histologic phase of a typical lesion there are degeneration of striated muscle fibers, hyperplasia of connective tissue, and organization of hemorrhage. There is a tendency to capsule formation. Islands of osteoid tissue surrounded by osteoblasts appear later. Capillary slits form, and marrow spaces are seen. There are occasionally small collections of colloid-like material, presumably osteomucin. These areas apparently form nuclei for future bone spicules.

Cartilage, and occasionally pseudocartilage, may be present. Myxomatous tissue is not uncommon; it may simulate osteogenic sarcoma, and when there is also cartilage, it may resemble chondromyxosarcoma. Angiomatous tissue is rather frequently seen.

Bowers<sup>(7)</sup> compared the histopathologic findings in a case in which the lesion was finally absorbed with those of a case in which the lesion persisted and required operation. The former showed a predominant number of giant or osteoclastic cells. These cells were not seen in the specimen which was not absorbed.



### Diagnosis

In a typical case of traumatic myositis ossificans there is a history of moderate or severe injury, followed by hemorrhage into the muscle and the formation of a hard tumor. The condition occurs most frequently in males between the ages of 20 and 40. In this country it is most common following a single injury to football players and other athletes.

In thirty cases studied by Geschickter and Copeland<sup>(5)</sup> the muscles most commonly involved were the brachialis anticus and the quadriceps femoris. However, no muscle group is exempt.

The most constant symptom is pain. It may be of short duration, persistent, or progressive for varying periods of time. When the lesion is near a muscle or a joint, limitation of motion may result. In the early phase of the disease there is a doughy, tender swelling which gradually increases in size and becomes more and more firm.

Ossification usually is present after three to six weeks. The growth is self-limited, and usually becomes stationary after the sixth week. There may be a mass which varies in size and consistency for as long as six months. If absorption does not occur, the mass may persist for years.

Roentgenograms usually show a single, more or less wedge-shaped area of laminated bone, separated from normal bone by soft tissue throughout most of its length. Its edges are usually smooth and well defined. Variations occur in which the wedge of new bone may adjoin normal bone. One free edge may be irregular; this edge may assume the appearance of the "dotted veil."<sup>(5)</sup>

At times ossification may be extensive and closely imitate osteogenic sarcoma. Firtel<sup>(8)</sup> reported such a case in a 35 year old white male. Pack and Braund<sup>(9)</sup> reported three cases of myositis ossificans in which malignancy subsequently developed. Shipley<sup>(1)</sup> found four similar cases in the literature, and Geschickter and Copeland<sup>(5)</sup> recorded two.

Although myositis ossificans is found most frequently near the long bones, it may develop in any of the muscle groups of the body; but we were able to find reports of only 2 cases involving paravertebral muscle. Geschickter and Maseritz<sup>(6)</sup> reported involvement of the lumbar muscles in an 18



Fig. 1. The paper clip indicates the lesion involving the tissues in the region of the right transverse process of the second lumbar vertebra.

year old white male. Birge<sup>(10)</sup> and his colleagues recently reported a similar case in a 10 year old girl. In the following case, myositis ossificans was again found in the paravertebral region.

### Case Report

A 17 year old white boy was admitted on September 8, 1950, to the orthopedic service of Watts Hospital under the care of Dr. Beverly Raney.

The patient stated that about two months prior to admission he had begun to have a vague aching pain in the right lumbar region. He had been doing heavy work, including lifting, but he did not recall any particular strain. His pain gradually became worse, and he consulted a physician who told him that he probably had an acute back strain and treated him for this condition. Relief was not obtained.

About ten days before admission the pain became quite severe, roentgenograms were made, and a "bone tumor" was found. He was then referred to Dr. Raney for treatment. The pain radiated to the right flank in the mid-axillary line. There was no radiation to the abdomen nor to the legs. The pain was increased by motion of the back, coughing, and sneezing. It persisted in recumbency. There was no history of previous attacks of back pain. The patient estimated that he had lost at least 15 pounds in the month prior to admission; he attributed this to loss of appetite.

Physical examination showed a tall, slender, young white male who did not appear to be acutely ill. The examination was negative except for findings referable to the right mid-lumbar area. In this area there was tenderness, especially to the right of the second lumbar vertebra. On attempted flexion of the back there was sharp lumbar spasm. The knee and ankle jerks were normal. There were



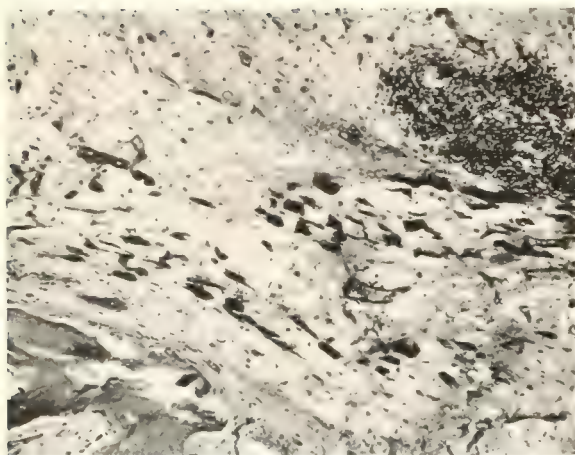


Fig. 2. Photomicrograph showing a chronic inflammatory process in degenerating muscular tissue adjacent to the bony mass (X 110). Hematoxylin and eosin.

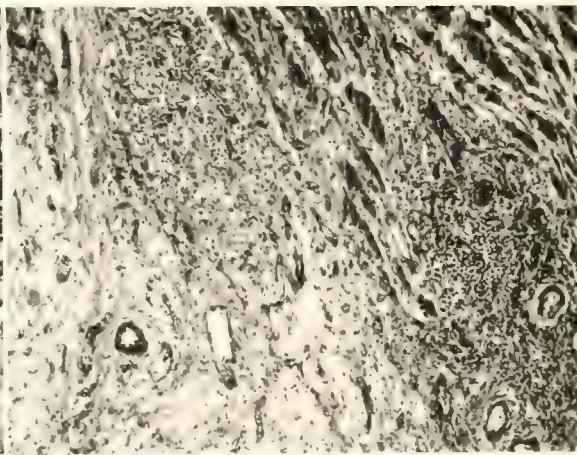


Fig. 3. Here the degenerating muscle cells are widely separated and are intensely eosinophilic. (X 110) Hematoxylin and eosin.

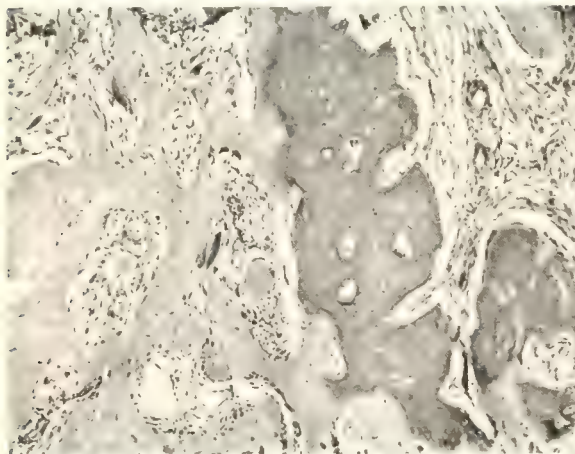


Fig. 4. Photomicrograph showing osteoid tissue and irregular bony spicules (X 110). The marrow spaces are occupied by loose vascular connective tissue containing scattered inflammatory cells. Hematoxylin and eosin.

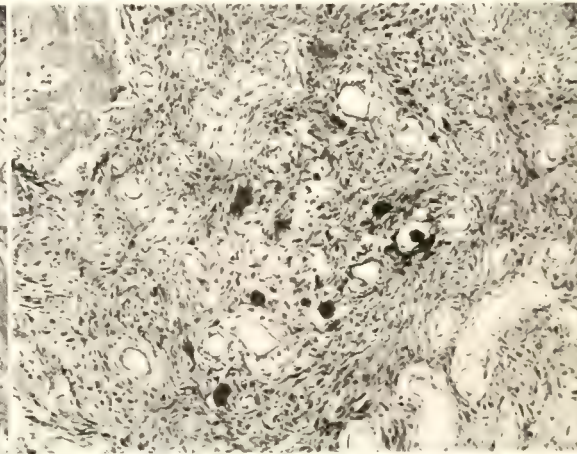


Fig. 5. This dense vascular connective tissue contains several giant cells. The area was surrounded by osteoid tissue, a little of which is seen in the upper left. (X 110) Hematoxylin and eosin.

no changes in sensation in the legs. The lower extremities were equal in length and size. Hip abduction was free. There was no pain on straight-leg-raising.

The blood pressure and the routine laboratory tests were within normal limits. Roentgenograms of the lumbosacral spine (fig. 1.) showed a bone tumor occupying the transverse process of the second lumbar vertebra on the right side, measuring 4 by 3 by 2 cm. This was a mottled osteolytic and productive expansile lesion, apparently arising in the transverse process, expanding it, and completely destroying its normal architecture. This lesion did not appear to have broken through the limits of the bone capsule. There appeared to be no deformity of any of the adjacent structures, and the tumor lay in the usual position of the transverse process.

On the fifth hospital day the mass was removed. The patient had an uneventful postoperative course, and was discharged in good condition on September 16, 1950.

The gross specimen consisted of a large piece of tissue measuring about 5 by 4 by 2.5 cm. One end

of this was spongy bone, representing the point of separation from the second lumbar vertebra. The remainder was an irregular bony mass covered by soft tissue, including muscle. There were, in addition, a number of smaller fragments of soft tissue and chips of bone.

Microscopically, the soft tissue (fig. 2) consisted of striated muscle, fat, and areolar tissue which were involved by a chronic inflammatory process. The predominating cells in the exudate were lymphocytes and plasma cells. The muscular tissue showed degenerative changes consisting of swelling of the fibers and an increased affinity for eosin (fig. 3). Fibrosis was taking place within the muscular tissue. There was fresh hemorrhage in this soft tissue from the operative procedure, but no evidence of old hemorrhage was seen.

The hard tissue, which was decalcified, showed considerable variation in its appearance. Much of it was composed of normal mature spicules of bone, with an orderly arrangement of osteoblasts along their surfaces. Another large portion consisted of osteoid tissue (fig. 4) in the form of both narrow



and broad ribbons. The osteoid was in close association with bundles of hyalinized collagen, which presented a pattern similar to the osteoid, and it seemed clear that the osteoid had its origin from this altered connective tissue. It was often impossible to tell where one ended and the other began. The marrow spaces between the osseous and osteoid spicules were not occupied by red marrow, but rather by connective tissue. Some of this was loose areolar tissue consisting of fine collagen fibrils and scattered fibroblasts, and containing rather large vascular spaces. In other places the bundles of collagen were coarser, and formed a dense interlacing network containing numerous fibroblasts. There were some rather large islands of this dense connective tissue, in which numerous multinucleated cells interpreted as osteoclasts were seen (fig. 5). Inflammatory cells of various types were scattered through the connective tissue portion of the lesion.

The diagnosis was not apparent to us, because of the remarkable variation in the pattern of the lesion, but the process was considered benign. A consultation with the Armed Forces Institute of Pathology was obtained, and their diagnosis was myositis ossificans of the paravertebral type. The Institute has collected a number of these lesions arising in the same area which have been mistaken for sarcomas. Long term follow-up has demonstrated their benignancy, even in cases in which the patients have died from bladder infections and decubitus ulcers due to cord compression by the mass<sup>(11)</sup>.

### *Differential Diagnosis*

When one encounters a paravertebral mass of bony tissue in a young adolescent or a child, particularly following trauma, the following conditions must be considered:

1. *Benign conditions characterized by excessive bone formation—ossifying periostitis, ossifying hematoma, and myositis ossificans.* Ossifying periostitis usually occurs along bony prominences, and bone proliferation is not extensive. Ossifying hematoma may be essentially the same condition as myositis ossificans, except that it occurs in tissue other than muscle.

2. *Benign bone tumors—osteochondromas, chondromas, giant cell tumors, or hemangiomas.* Giant cell tumors cause pain and bone destruction, and are most frequently seen in the vertebral body. The vertical striations in the body of the vertebra as seen roentgenographically are pathognomonic of hemangioma. Rarely does osteochondroma involve vertebrae.

3. *Malignant tumors—metastatic lesions and osteogenic sarcoma.* Metastatic lesions are more common and are usually multiple in the spine. Osteogenic sarcoma demonstrates much bone destruction as well as new bone formation, invades the surrounding tissue, and is usually rapidly fatal.

4. *Infectious diseases—tuberculosis, pyogenic osteomyelitis, typhoid osteomyelitis, brucellosis, blastomycosis, and syphilis.* Re-

sults of specific tests, roentgenographic appearance, and clinical course are usually sufficient to provide differential diagnosis<sup>(10)</sup>.

If there is doubt as to diagnosis, biopsy is indicated, but giant cell tumor and osteogenic sarcoma may be so closely simulated by myositis ossificans that even histologic diagnosis is difficult.

### *Treatment*

Prophylactic treatment of myositis ossificans includes avoidance of massage, the application of cold compresses or ice packs, and the use of a compression bandage immediately after injury in order to reduce hemorrhage. Thorndike<sup>(12)</sup> states that evacuation of a hematoma in its early stages is contraindicated.

Persistence of symptoms after an injury is an indication for periodic roentgenographic examination to rule out early myositis ossificans.

Thorndike<sup>(12)</sup> recommends excision only in cases in which ossification has occurred near a joint, or in the origin or insertion of a muscle, or in which function has been permanently impaired. Even when there is much impairment, however, he advises delay of operation until twelve to twenty-four months after injury.

The best treatment is watchful waiting<sup>(5)</sup>. It is inadvisable to intervene surgically in the early stages of tissue reaction to trauma, since growth may be stimulated and recurrence may result. Recurrence is common, especially if surgery is undertaken before six months or if the resection is incomplete, traumatic, or performed without proper regard for hemostasis.

Bowers<sup>(7)</sup> divides these cases into (1) those in which no treatment is necessary, (2) those in which conservative treatment is sufficient, and (3) those in which operation is necessary. In the first group, small, calcified, symptomless areas are discovered during examination for other difficulties. In the second group, the calcified area is more extensive, symptoms are present, and there is some disability. In this group, gradual absorption of the mass usually takes place in from five to twelve months after its appearance. The third group consists of cases in which absorption does not occur after the proper period of rest and observation. The mass in these cases is virtually always located in the region of a joint, and

disables the patient by limiting joint motion.

Thorndike<sup>(12)</sup> found that in 36 per cent of his cases the lesions were absorbed spontaneously after a period of several months to five years. Smaller areas and those in the upper extremities have a greater tendency to disappear.

### Summary

The pathologic aspects of traumatic myositis ossificans have been discussed, the clinical picture has been briefly reviewed, and a case involving paravertebral musculature has been described.

### Abstract of Discussion

**Dr. R. B. Raney (Durham):** In the case described, the absence of a history of injury, the persistent and increasing pain unrelieved by symptomatic treatment, and the weight loss suggested a malignant condition, despite the benign roentgenographic appearance of the lesion. Surgical exploration and excision of the mass were thought to be indicated from both diagnostic and therapeutic standpoints. The region of the right transverse process of the second lumbar vertebra was approached through a 4 inch longitudinal, paraspinal incision, exposing a rounded, lobulated, hard mass about 1½ inches in diameter, which included the transverse process and from which the soft tissues were dissected without unusual difficulty. This mass was resected at its base from the vertebral body. The dissection was facilitated by the use of the electric scalpel, and there was very little bleeding.

This patient has been seen five months after operation, at which time he was carrying out his usual activity without pain. There was no tenderness, stiffness of the back, or pain on motion of the back.

The progressive form of myositis ossificans, which is associated usually with congenital deformities and is relatively rare, is quite distinct clinically from the localized or traumatic type, which forms the basis of the present discussion. Traumatic myositis ossificans occurring in the extremities is usually recognized with ease because of typical clinical and roentgenographic characteristics. Its treatment is well established, and consists of local rest, followed in a minority of cases by surgical excision when necessitated by symptoms of a mechanical nature persisting in its mature stage. However, in rare cases of extremity involvement, pain and resorption of bone may make differentiation from osteogenic sarcoma or other malignancy difficult.

Instances of needless amputation have occurred. Parosteal osteoma, which may give a very similar clinical and roentgenographic picture, must be differentiated. In such cases, biopsy is indicated.

Traumatic myositis ossificans of paravertebral musculature is uncommon, and in the past has presented a somewhat confusing picture. In recent years, much work has been done at the Armed Forces Institute of Pathology to clarify this entity. Dr. Lent Johnson of the Institute recently presented an exhibit at the American Academy of Orthopedic Surgeons meeting, demonstrating well the varied histologic picture of these lesions, which may, in different parts of the specimen and different phases of its development, simulate closely other entities.

The surgeon who performs a biopsy in this type of case should provide the pathologist with a cross-section of the entire lesion and with adequate clinical

data. We should all become familiar with this lesion, which can be recognized and treated with satisfaction.

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## CLINICAL ASPECTS OF THE TREATMENT OF SYPHILIS

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Syphilis continues to be a major disease, as evidenced by the report of the year 1948 of 338,141 new cases affecting 127,210 white and 210,931 non-white individuals<sup>(1)</sup>. With the advance of medicine and the development of new antibiotics, there has been remarkable progress in the field of syphilis therapy. It has become comparatively easy and inexpensive to treat syphilis adequately, without jeopardizing the life of the patient by therapeutic mishaps.

### Diagnosis

An ever important part of the treatment of syphilis is establishing the diagnosis—a task which today has become much more difficult than physicians in general realize. In this age of multiple injections and transfusions, the possibility of needle transmission is higher than in the past. Cases have been reported in which infected blood was given to the innocent recipient prior to the development of genital lesions or positive serologic reaction in the donor.

Diagnosis has also been complicated by the

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nearly universal practice of treating gonorrhea with penicillin. The penicillin may prevent the development of the typical luetic genital lesion, thus depriving the physician of the one sure means of establishing the diagnosis—darkfield demonstration of *Treponema pallidum* obtained from the lesion. Syphilis will subsequently be manifest by a positive serologic reaction. The treatment of other diseases with penicillin may have the same subsequent effect on syphilis, especially if these other diseases are treated during the critical luetic development period.

Genital lesions to be differentiated from syphilis are: chancroid; lymphopathia venereum; scabies; granuloma inguinale; trauma; herpes progenitalis; neoplasm; allergy; histoplasmosis; erosions and ulcerations secondary to purulent urethral discharge, especially that due to gonorrhea; insect bites.

In general it may be said that the appearance of the lesion is of little aid in establishing the etiologic diagnosis. *Treponema pallidum* has been demonstrated in the most innocuous appearing lesion. Estimation of the incubation period is of very little value. One lesion harbouring both the organism of chancroid, *Hemophilus ducreyi*, and that of syphilis may develop, yet the lesion may have appeared in the time interval usually associated with chancroid. An aid in the differential diagnosis in this instance is the response of the lesion to sulfadiazine. Sulfonamide drugs usually clear up the uncomplicated lesion within five days, but it must be remembered that the classic course of the luetic lesion is spontaneous regression and disappearance after a variable period of time.

Whenever asymptomatic syphilis is suspected and the diagnosis must be made by serologic reaction, it is necessary that tests be made monthly for three consecutive months. If after this period the blood is still negative, it may be presumed that the subject does not have syphilis.

#### Serologic Testing

The various serologic tests for syphilis that have been developed are nearly as numerous as the trade names of the various penicillins that are used in the treatment of this disease. The multiplicity of tests indicates that no one test is ideal and that all have the same defect to a variable extent. As is well known, none of the commonly used tests available for syphilis incorporates a true antigen-antibody type of reaction. Why

the tests used in making the diagnosis respond positively in the presence of syphilis is still an immunologic problem. It is realized that some of the material used may be similar to the protein molecular makeup of the *Treponema pallidum*. Recently, however, it has been possible to culture a strain of treponema which is considered to have the same antigenic response as *Treponema pallidum*. In comparing the reactions of this antigen in a serologic test with the antigens of the alcoholic tissue extract type reinforced with cholesterol, Kolmer, Kast, and Lynch concluded that the differences obtained were insignificant and that probably the spirochetal antigen could not be used because of the large percentage of nonspecific complement fixation antibodies<sup>(2)</sup>. Beck found the two antigens to be of similar specificity<sup>(3)</sup>. Eagle and Hogan favor the use of the spirochetal antigen (Reiter strain)<sup>(4)</sup>.

#### Types of tests

There are two types of serologic tests: (1) the complement fixation test, and (2) the precipitin test. The Kolmer modification of the Wassermann test is the complement fixation test in general use in this country. Precipitin tests are exemplified by the Eagle, Hinton, Kahn, and Kline tests. These five are the tests most commonly used for serodiagnosis. There is less than 10 per cent difference in sensitivity and less than 1.0 per cent difference in specificity among the five tests. Serologic tests for syphilis, as of 1935, in American studies done on 415 cases of confirmed syphilis, ranged from 65.8 per cent to 88.2 per cent in sensitivity and approximately 99.5 per cent in specificity<sup>(5)</sup>.

The United States Public Health Services recognize and use the following tests: Eagle, Hinton, Kahn, Kline, Kolmer, Mazzini, Rein-Bossak, and V.D.R.L.<sup>(6)</sup>

In making a serodiagnosis of syphilis, it has been customary to use two tests, and the most frequent combination is the Kahn and Kolmer. An evaluation of the literature will show that there is little, if any, difference in sensitivity and specificity between these two tests, and actually a comparison of two Kahn tests done at different times would be just as significant. In the early development period of these tests, a complement fixation test, such as the Kolmer, was thought to be more specific than a precipitin test. This is not true under clinical testing conditions.

The greatest advancement in serologic test-

ing that has been made in the last ten years is the use of standardized quantitative Kahn test. This test enables syphilologists to follow the progress of the disease and to determine the efficiency of treatment. A serologic relapse occurs before there is a clinical relapse, and this method of testing enables the physician to reinstitute treatment without significant delay.

#### *False positive reactions*

To avoid making serious mistakes, the clinician should be aware of diseases that give biologically false positive reactions. The following conditions are known to give false positive reactions in some instances: leprosy (60 to 70 per cent of the cases); malaria (10 to 20 per cent of the cases); yaws; tuberculosis; trypanosomiasis; acute bronchitis; pleural exudate; pneumonia; psoriasis; lupus vulgaris; acne; cerebral hemorrhage; schizophrenia; epidemic encephalomyelitis; eclampsia; cholecystitis; measles, senile cachexia; renal insufficiency; Parkinson's disease; thrombophlebitis; bilirubinemia; menstruation; malignancy; Boeck's sarcoid.

The diseases listed leave few pathologic states which are not capable of giving a false positive reaction. If it is remembered that false positives are invariably associated with a diseased state, mistakes may be prevented. The duration and intensity of these false positives may be prolonged over a period of weeks to months. Especially in malaria a strongly titered Kahn, such as 256, may be obtained.

#### *Serologic syndromes*

In order to treat syphilis intelligently one must be aware of certain serologic syndromes. In the older literature frequent mention is made of "serum fastness" and serologic relapse. With the advent of penicillin, we now know that there are asymptomatic reinfections which, in the past, have certainly been called treatment failures.

Serum fastness is a fixed positive reaction which will not become negative regardless of the intensity or duration of treatment. This condition is most likely to occur in the late stages of syphilis.

Serologic relapse is the reversion of the serum from a negative reaction back to a positive reaction. A serologic relapse also occurs whenever the quantitative Kahn titer starts rising after having been brought to a low level by treatment. As previously stated,

this rise in the quantitative Kahn titer precedes a clinical relapse.

The serologic relapse must be differentiated from an asymptomatic reinfection. Relapse is a treatment failure. A reinfection is an immune or prophylactic failure. The differentiation of reinfection from relapse has been considered a difficult and controversial subject. Work done experimentally on rabbits has shown that reinfection could be produced in animals with acute or latent syphilis within ten days after the completion of adequate penicillin treatment.

"The manifestations of the disease resulting from the second spirochaetal invasion varied with the duration of the first infection and the subsequent development of local and systemic immune forces by the host. All animals adequately treated for early syphilis could be reinfected, yet only 27 per cent developed a new lesion at the site of the second induced invasion. Fifty-three per cent of the animals treated for latent syphilis developed asymptomatic reinfections."<sup>(7)</sup>

This condition is now thought to occur in human beings, and it has been stated that the titer in an asymptomatic reinfection becomes higher than the titer in the initial infection, enabling syphilologists to differentiate relapses from reinfections<sup>(8)</sup>.

#### *Treatment and Results*

Shortly after the discovery of penicillin as a useful antibiotic in the treatment of bacterial diseases, it was tried on treponemal infections. Mahoney and colleagues, in 1943, reported the use of 1.2 million units of penicillin, administered in 20,000 unit doses at three-hour intervals for sixty injections over a period of seven and one-half days, in four cases of darkfield positive primary syphilis<sup>(9)</sup>. Mahoney's four original cases have now been followed for six years, and there has been no clinical or serologic evidence of relapse. Since that time the penicillin fractions have been purified, and new antibiotics have been introduced. It has been demonstrated that Bacitracin in combination with penicillin has a synergistic effect and gives good results in animal therapy. Aureomycin has been shown to be extremely effective, as has Chloromycetin. Streptomycin is ineffective.

An evaluation of the clinical effects of penicillin therapy is as yet extremely difficult. When penicillin first became commercially available, emphasis was on production, and, as a result, various types were marketed. Subsequently, it became apparent that all strains of penicillin did not have the same degree of efficacy, and that penicillin K was



ineffective. Today the treatment of syphilis is done with modifications of penicillin G, the most effective strain discovered to date. Modifications are directed in such a fashion as to prolong the duration of elevated serum levels of penicillin without altering its antibiotic potency.

In evaluating the results of penicillin in the treatment of syphilis, consideration must be given to the stage of the disease that is treated. The best results are obtained in the treatment of early cases. Primary syphilis with a seronegative reaction makes the best response to treatment. Primary syphilis with seropositive reaction and secondary syphilis make the next best response. Early latent syphilis of less than four years' duration responds better than syphilis of longer duration. Primary, secondary, and early latent syphilis treated with an adequate amount of penicillin over a sufficient period of time has a cure rate of about 84 to 88 per cent.

Insufficient period of observation has made it difficult to evaluate the effects of penicillin therapy on late and tertiary syphilis. The cure rate, however, is much lower than that found in early syphilis, and reports from different sources indicate marked variation in results and conflicting conclusions. In general, the consensus seems to be that reversal of the serologic tests for syphilis occurs infrequently. Scully, Falk, and Stokes, in a follow-up study of patients over a period of six months to more than two years, observed that less than 10 per cent of the patients with late symptomatic neurosyphilis showed complete serologic reversal<sup>(10)</sup>. Serologic fastness of the blood, however, does not mean that the same state exists in the spinal fluid.

#### *Neurosyphilis*

In an observation period of more than two years, Stokes, Falk, and Gammon, of the University of Pennsylvania, found that, in the treatment of neurosyphilis with penicillin alone, the following results were obtained: normal spinal fluid in 80 per cent of the patients with tabes; in 74 per cent of those with asymptomatic neurosyphilis; in 60 per cent of those with taboparesis; and in 46 per cent of those with paresis. They concluded that penicillin is superior to other forms of treatment for all types of neurosyphilis<sup>(11)</sup>. It has been shown that in syphilis of the central nervous system, improvement continues to occur more than two years after the completion of penicillin therapy.

In all lesions of gummatous lues treated at Delgado Memorial Hospital Rapid Treatment Center, New Orleans (16 cases treated during the last two years), rapid clearing of the lesion and lowering of the Kahn titer have resulted, but no reversal of the positive serologic reaction. This has been the experience in gumma therapy in other parts of the country. A case of a gummatous lesion that was not affected by penicillin but was rapidly resolved with bismuth and arsenical treatment has been reported<sup>(12)</sup>.

#### *Cardiovascular syphilis*

The efficacy and mode of treatment of cardiovascular syphilis are points of controversy. There are competent groups which believe that all patients with cardiovascular lues should be handled with especial care, prepared with heavy metals, and then treated with penicillin. Another trend is towards the initiation of therapy with full doses of penicillin. Moore feels that the risk of the Herxheimer reaction to penicillin in cardiovascular syphilis has been greatly exaggerated<sup>(13)</sup>. Forty-five patients with cardiovascular lues who, according to their histories, have never received anti-luetic therapy, have been treated at the Delgado Rapid Treatment Center with full therapeutic doses of penicillin without untoward reactions. All the patients are still living, but it is too early to evaluate the results of therapy. It has been shown by Moore, Padgett, and Stratton that the life expectancy of treated cases of cardiovascular lues is nearly one and three-quarters times that of untreated cases.

#### *Treatment of former syphilitic women during pregnancy*

A perennial question in the therapy of syphilis is that further treatment of once syphilitic women during subsequent pregnancies. In a study by Goodwin and Farber, it was concluded that it was not necessary to administer antisiphilitic treatment to a previously syphilitic woman during pregnancy, provided that she has received (1) 4.0 Gm. or more of arsphenamine or the arsenical equivalent, with bismuth; or (2) 2.4 million units or more of penicillin, given either in early or late latent syphilis, administered either during a previous pregnancy or during a non-pregnant interval. It is recommended that a syphilitic woman be further treated in any pregnancy in which there is clinical evidence of active infection or in which the

Table 1  
 Penicillin Schedules Used in the Treatment of Secondary Syphilis  
 and Results of Therapy

<i>Types of Penicillin</i>	<i>Total Dosage in Million Units</i>	<i>Dosage Schedule</i>	<i>Duration of Therapy (days)</i>	<i>No. Cases</i>	<i>Seropositives Before Treatment (Percent.)</i>	<i>Period of Observation (months)</i>	<i>Seronegatives at end of Observation Period (Percent.)</i>
Crystalline G	2.4	40,000 units every 3 hours	8	234	100	12 24	75.4 80.9
Crystalline G	4.8	80,000 units every 3 hours	8	243	99.6	11-12 24	77.4 83.0
Crystalline G in peanut oil and beeswax	4.2	300,000 units every 3 hours	14	49	98.0	24	70.3
Crystalline G	7.2	200,000 units every 2 hours	3	114	100	18-21	85.4
Crystalline G in peanut oil and beeswax	9	600,000 units every 24 hours	15	219	99.1	15-18	80.2
Crystalline G in peanut oil and beeswax	18	600,000 units 3 times a week	70	81	100	15-18	95.8

blood test is positive in a quantitative titer of 16 or more dilutions<sup>(14)</sup>.

#### *Complications*

The complications that may develop during the treatment of syphilis are few and inconsequential. The most dramatic complication seen with penicillin and other antibiotic treatment is the Jarisch-Herxheimer reaction. This reaction is manifested in two forms: (1) the febrile or systemic form, marked by chilliness, elevation of temperature, malaise, headache, and nausea, and in some patients by the temporary aggravation of previously mild psychotic symptoms; and (2) the focal or cutaneous form, characterized by edema or pain in the primary ulcer, enlargement of or pain in the regional lymph nodes, intensification of a secondary eruption or of other local lesions, or the development of a generalized roseola in a case of primary syphilis. All these signs and symptoms occur between four and forty-eight hours following the initial injection of penicillin. This reaction occurs most frequently in early syphilis, and is observed whether the patient is treated with heavy metal or penicillin.

Occasionally one sees a patient who becomes clinically worse after treatment with penicillin. These are patients with cardiovascular lues. It is thought that the treatment has eliminated the foci of spirochetal infection and resultant scar tissue forms, constricting the blood vessels. This results in a greater degree of ischemia than was formerly present, making the patient feel worse instead of better. Fortunately, this

complication, the "therapeutic paradox," is rare and should not discourage treatment.

A complication that was formerly seen when arsenical products were used in the treatment of syphilis was the "nitritoid crisis." This was a condition of vasomotor shock, coming on immediately after the intravenous administration of the arsenical compound. It does not occur with penicillin therapy.

#### *Dosage of Penicillin*

The dosage schedule in the treatment of syphilis is still quite flexible, and the correct amount to be administered in the various phases of syphilis is still being determined. In the past four years ideas as to how much penicillin to give, how often, and over how long a period of time have changed. It will be at least two decades before most of the problems are settled. To date, it has been concluded that the minimum effective dosage of penicillin is expressed as an amount acting over a period of time. The various dosage schedules that are being presented give blood levels of penicillin many times higher than the minimal amount required for spirocheticidal effects. The favored brand of penicillin used in the ambulatory therapy of syphilis, procaine penicillin G, with 2 per cent aluminum monostearate in peanut oil, maintains levels higher than the minimal level for a period of forty-eight hours and longer when given in 600,000 unit dosages.

Routinely, all patients that are to be treated for syphilis have the following tests before treatment is started: (1) darkfield examination when indicated; (2) serologic



test for syphilis with quantitative Kahn tests; (3) spinal taps in all cases of syphilis that have progressed beyond the secondary stage, with cell count and quantitative protein, colloidal gold, and Kolmer reaction tests done on all fluid.

The recommended dosage of penicillin for the treatment of primary, secondary, and early latent syphilis is 3 million units. This is given as one injection of 600,000 units per day for five days—in the form of procaine penicillin G, with 2 per cent aluminum monostearate in peanut oil. The recommended dosage for late latent and tertiary lues of all forms is 6 to 10 million units.

Table 1 shows the dosage schedules that have been used in the treatment of secondary syphilis, with an evaluation of the results<sup>(15)</sup>.

Following therapy all patients have a blood serologic test monthly for six months and a spinal tap at the end of six months. After the first six months serologic tests are done every two months for an additional six months and then every four months for a period of four years. If, after a period of four years, there has been no evidence of serologic or clinical relapse, the patient can be considered cured.

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## THE PUPILLARY CHANGES ASSOCIATED WITH DIABETIC NEUROPATHY

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The pupillary changes associated with diabetic neuropathy do not seem to be as widely appreciated as many of the other signs and symptoms of the disease. Smith<sup>(1)</sup>, in describing the characteristics of diabetic neuropathy, denied that the pupils or sphincters are affected, and stated that negative findings at these points are important in differentiating diabetic neuropathy from tabes.

### Review of 145 Cases

In an effort to determine the frequency and types of pupillary abnormalities associated with diabetic neuropathy, 145 cases of this disease seen at Duke Hospital during the past 10 years have been reviewed. Only those cases in which the same pupillary changes were noted by more than one examiner are included among those showing abnormalities. When this criterion was employed, 12 of the 145 patients were considered to have pupillary abnormalities.

A summary of the significant points about each of the 12 cases in which pupillary changes were described is given in the accompanying chart. The ages varied from 21 to 60 years, but in most instances the diabetic condition was known to have existed for several years. In one case, however, no previous diagnosis of diabetes had been made. Diabetic regulation was poor in all cases. Some patients presented problems in control because of disturbed gastrointestinal motility, with accompanying anorexia, nausea, vomiting, or diarrhea. Treatment with insulin as well as diet was necessary in every case.

In 5 cases, typical diabetic retinal changes were described. Three patients were said to

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Table 1

Case No.	Sex	Age	Known duration of diabetes (years)	Serologic tests for Syphilis	Cerebrospinal Fluid	Evidence of Neuropathy	Retinal Findings (Retinopathy)	Pupillary Changes
1.	F	57	None	Negative	None	Ankle and knee jerks absent. Sensory changes in the feet difficult to interpret because of vascular disease.	No hemorrhages or exudates.	Pupils very small and reacted only slightly to light. No reaction on accommodation. Imperfect dilation with mydriatics.
2.	M	21	12	Negative	None	Generalized weakness and anorexia; nocturnal diarrhea; abnormal sweating; postural hypotension; disturbed gastrointestinal motility. Position sense absent in feet; light touch perception and vibratory sense (to no. 256 tuning fork) diminished below knees bilaterally. Plantar response downward.	Many small, hard, waxy exudates and punctate hemorrhages.	Pupils small, round, equal; no reaction to light, but constricted on accommodation. Dilated evenly with Neosynephrine.
3.	F	55	15	Negative	Normal findings	Intermittent aching pain in left arm. No. 256 tuning fork, light touch, pin prick not felt over toes. Ankle jerks absent bilaterally.	Many waxy and occasional fluffy exudates. Old and fresh flame-shaped and punctate hemorrhages.	Pupils equal, irregular; reacted slowly to light and then tended to dilate again without true hyperpupus. Reacted well on accommodation.
4.	M	56	2	Kalm positive; Wasserman negative	Pandy 1 plus; Protein 103 mg. per 100 cc. Serology, mastic and microscopic neg.	Vibratory sense (no. 256 fork) absent over toes; and perception of pin prick diminished below mid thighs. Ankle jerks decreased.	Fundi not visualized.	Left pupil was larger than right; both reacted sluggishly to light and on accommodation. Cataracts bilaterally.
5.	M	38	1	Negative	Protein 106 mg. per 100 cc. 4 mononuclear cells per mm.(3) Serology and mastic neg.	Loss of vision in right eye; numbness and tingling of lower extremities. Ankle jerks and knee jerks absent bilaterally.	Scattered hard, waxy exudates and punctate hemorrhages.	Small and irregular pupils without reaction to light or accommodation. Poor response to mydriatics.
6.	M	43	10	Negative	None	Sharp pains in feet for one year; postural hypotension; abnormal sweating; calf tenderness. Perception of pin prick, light touch, and no. 256 tuning fork diminished over feet. Ankle and knee jerks diminished to absent bilaterally.	Fundi not visualized.	Small (1-2 mm.) irregular pupils; sluggish reaction to light and on accommodation.
7.	F	55	2	Negative	None	Six weeks of aching back pain, with radiation to legs. Ankle and knee jerks diminished to absent bilaterally. No demonstrable sensory changes.	No hemorrhages or exudates seen in O.D. O.S.	Left pupil small, irregular, and non-reactive. Right pupil not described.
8.	M	47	21	Negative	None	Diarrhea with 8-10 watery stools <i>q.d.</i> ; postural hypotension; disturbed sweating. Vibratory sense (no. 256 fork), perception of pin prick and light touch decreased below knees bilaterally. Reflexes in legs hypoaesthetic.	Many hard exudates and capillary aneurysms.	Right pupil larger than left. Both reacted sluggishly to light and on accommodation and convergence. At times reaction on accommodation thought to be better than that to light.
9.	M	25	15	Negative	Normal	Dwarfism; disturbed gastrointestinal motility; postural hypotension; disturbed sweating; neuropathic joints. Biceps and triceps reflexes hyperactive. Perception of light touch absent over hands. Hyperesthesia of feet and soles. Ankle and knee jerks absent. Romberg negative. Plantars down.	Fundi not seen well. No hemorrhages or exudates described.	Each pupil about 2 mm. in diameter, somewhat oval, irregular; dilated poorly with shading and mydriatics; reacted fairly well on accommodation. No reaction to light. On several occasions dilation to light was noted.
10.	F	55	16	Negative	Normal fluid and manometrics	Extramembranary cord tumor (meningioma) removed in 1944, with good return of strength to legs. Several years later shooting pains developed in legs and feet. These were thought to be due to diabetic neuropathy rather than recurrence of tumor.	No hemorrhages or exudates seen.	Pupils slightly irregular, with left smaller than right. Both reacted to light and on accommodation.
11.	M	33	17	Negative	None	Progressive weakness of lower extremities. Vibratory sense (no. 256 fork) absent over feet. Light touch absent over feet. Right knee and ankle jerks absent, with 1 plus reflexes on left. Atrophy of left leg following poliomyelitis.	Scattered hard exudates and punctate hemorrhages bilaterally.	Pupils irregular; reacted poorly to light and well on accommodation.
12.	F	60	25	Negative	Normal	Paresthesias of lower extremities. Vibratory sense (no. 256 fork) decreased over ankles and toes. Knee jerks diminished, ankle jerks absent bilaterally.	Fundi poorly visualized. but no hemorrhages or exudates seen.	Pupils small and fixed to light and on accommodation.



have no hemorrhages or exudates, and in the remaining 4, the fundi could not be visualized clearly.

Since pupillary abnormalities are frequently associated with neurosyphilis, particular attention was given to the past history and to the results of serologic studies on the blood and spinal fluid. Of these 12 patients, only 2 had a history of syphilis, inadequately treated in each case. Both patients had negative spinal fluid serology, although in one the peripheral blood gave a weakly positive reaction. The spinal fluid of these 2 patients showed an abnormally high protein content. Examination of the spinal fluid in 4 other cases revealed no abnormalities.

The pupillary changes varied considerably. Only 1 patient (case 9) presented all the changes characteristic of classic Argyll Robertson pupils. However, cases 2 and 11 fulfill all the criteria except one. The former showed a normal response to mydriatics, and in the latter this reaction was not tested. Six other patients had miotic pupils which failed to react, or reacted abnormally, to light and accommodation. Two of these had imperfect pupillary dilation when tested with mydriatics.

#### *Reports in the Literature*

Similar abnormalities in pupillary size and reactions associated with diabetic neuropathy have been described by Rundles<sup>(2)</sup>. He reported that abnormal pupillary responses were present in one-fourth of a group of 25 diabetic patients with neuropathy which he studied. Two of these patients had Argyll Robertson pupils without any history or findings to suggest syphilis. The majority had miotic pupils which reacted sluggishly to light. Waite and Beetham<sup>(3)</sup> reported similar changes in a large group of diabetic patients in which they studied the incidence of ocular changes found in diabetes. Jordan<sup>(4)</sup> collected 23 cases of diabetic neuropathy with pupillary abnormalities. Five of these had typical Argyll Robertson pupils, again without any history or findings to suggest syphilis.

#### *Conclusion*

From the study herein reported and the review of others' observations, it is evident that a variety of changes in pupillary size and reactions may occur in diabetic neuropathy. Not infrequently, typical Argyll Robertson pupils are seen, in the absence of any other clinical or laboratory evidence of

neurosyphilis. More care in examining the pupils and in looking for the characteristic fundal changes in diabetic patients would probably reveal an even greater incidence of minor ocular changes in the course of diabetic neuropathy. It should also be pointed out that the presence of Argyll Robertson pupils and the absence of knee jerks and ankle jerks cannot be taken as unequivocal evidence of neurosyphilis, since such a combination may occur in diabetic neuropathy.

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## DIAGNOSIS OF TUMORS OF THE UTERINE CANAL

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The method of diagnosing tumors of the uterine canal which is described here is a combination of hystero-graphic studies and, if these contain a filling defect, direct inspection by hysteroscope.

In patients with irregular uterine bleeding, roentgen studies are always made before a hysteroscopic examination is done. If the roentgen study is negative, a hysteroscopic examination, or direct visualization of the uterine canal, is unnecessary. If there is a filling defect, however, diagnosis can be made by direct examination with the hysteroscope.

#### *Hystero-graphic Studies*

Our plan for making x-ray studies of the uterine canal is as follows:

If the patient has only a moderate amount of bleeding, the hystero-gram can be made at once. If there is profuse bleeding, however, it is preferable that the patient have Testosterone for several days prior to the study. The patient is brought to the x-ray room with no preliminary medication, put in the lithotomy position, and covered with sterile drapes, after which the vaginal vault is well cleansed with soap and water and

two applications of merthiolate. Sterile gown and gloves are used by the operator for the rest of the procedure.

The vaginal speculum is inserted into the vagina. When it has been properly placed and the cervix is in full view, a small probe is passed into the cervical canal to get the direction of the canal. If it is not markedly constricted, then the uterine cannula, which has a plastic tip, is inserted into the uterine canal, usually with little difficulty, and the dye is injected through the cannula into the canal. An aqueous dye is preferable to an oil dye, as the latter has been found to overshadow pathologic findings in the x-ray studies. From 5 to 7 cc. is the amount of dye usually used. If, however, the patient complains of the slightest discomfort before this amount has been instilled, the injection is stopped immediately.

With the uterine cannula in place following injection of the dye, an x-ray film is made. A second exposure is made after the uterine cannula has been withdrawn and the dye allowed partially to drain out of the canal into the vaginal vault. Following this procedure some patients complain of pain, which is usually remedied by the administration of 32 mg. ( $1\frac{1}{2}$  grain) of codeine. If there is any filling defect in either of the two films, the patient is then advised to have a hysteroscopic examination.

It is not possible to rely entirely on roentgen examination of the uterine canal to determine what type of tumor is present, or whether any tumor is present at all. The main object of the hystrogram is to see whether or not there is a filling defect. The filling defects, if there are any, resemble each other so closely that it is impossible to identify the condition from roentgen studies alone. For instance, a filling defect simulating a polyp will often be found to be a mass of endometrial hyperplasia; or a filling defect simulating a submucosal myoma may be a mass of endometrial hyperplasia. At times small ragged filling defects situated particularly at the cornu of the uterus may be suggestive of endometrial carcinoma. However, x-ray studies prior to a hysteroscopic examination are invaluable in finding the exact area where the lesion is probably located.

#### *Hysteroscopic Examination*

The hysteroscope is an instrument with a forward view Fontar lens system, which

largely prevents glare and reflection of light. This lens system is encased in a removable outer metal sheath, which is inserted into the uterine canal before the lens system is inserted. In conjunction with the lens system is a channel for the return flow of water, for the taking of biopsy specimens under direct vision, and for the fulguration of small polyps and masses of endometrium. It has been found that this type of hysteroscope—by which water flows in one entrance and out over the distal lens, bathes the uterine canal, and returns through another outlet—is superior to other types that we have used experimentally. No other lens system that we have used obtains as wide a scope of vision as the direct forward vision system.

Preparation of the patient for hysteroscopic examination is quite similar to the routine vaginal preparation for vaginal surgery. The patient is given an opiate with atropine one-half hour before the administration of Sodium Pentothal, which in itself usually provides sufficient anesthesia for the examination. In the operating room (the patient having been shaved previously), the vaginal vault is scrubbed well with soap and water, and painted with two applications of merthiolate. Sterile drapes are applied and, under aseptic conditions similar to those maintained in vaginal surgery, a speculum is inserted into the vaginal vault. The cervix is brought into view and, by means of a tenaculum applied to the upper lip, is drawn downward, following which a small uterine probe is used to get the direction of the canal.

Previous to this, however, it is important to determine whether there is any partial fixation of the fundus of the uterus, or whether any masses can be palpated in the adnexae. If the uterus is fixed posteriorly, for instance, it is probably best not to attempt a hysteroscopic examination. If, however, the uterus is freely movable, it is well dilated (following insertion of the uterine probe to get the direction of the cervical canal) with Goodell dilators, as for curettage. The outer sheath of the hysteroscope, with obturator similar to a urethroscope, is then inserted into the canal, past the internal os. The obturator is then removed, and the lens system, together with the built-in channel for water inflow and return, is inserted into this outer sheath. The connections for the inflow and outflow of water are made, and the light attachment is connected. Water



is allowed to run in at a moderate rate, the container being only slightly above the level of the patient.

The outflow may be facilitated by a very slight suction or by siphonage supplied by a container of water on the opposite side of the table. It is important to avoid strong suction, as this will tend to increase uterine bleeding. After the water is allowed to run out for a period of a few seconds, the outflow is cut off entirely and a view of the cervical canal may be obtained. It is probably best that under direct vision the hysteroscope be carried to the fundus for examination of the fundus and cornu first. After this area has been studied, the hysteroscope is gradually and slowly withdrawn towards the cervical canal. Any tumors that may be present in the canal will then fall into view.

The water should be lukewarm and preferably distilled, if photography is desired.

With practice, the various patterns of a normal endometrium will be recognized. At first, however, under the magnification of the lens system, the endometrium, being floated up by the continuous flow of water, will give the appearance of a pathologic condition, such as general carcinoma of the uterine canal. Repeated hysteroscopic examination of various patients, however, will enable the examiner to recognize normal endometrium or hyperplasia. Also, it will be found that light reflections occasionally occur, giving some areas of the uterine canal a greyish-white appearance which disappears when the hysteroscope is shifted. When hyperplasia of the endometrium is present, long strands of endometrium will float in the water. If, however, that same specimen were removed for some reason, it would be very difficult to find the hypertrophy of the endometrium as seen in the living patient, because the water tends to lift up and float small portions of endometrium or growths of any description.

Following inspection of the uterine canal, there being no growth present but probably filling defects caused by hyperplasia, the hysteroscope is withdrawn towards the cervical canal. A cervical canal which appears very white through the hysteroscope is studied for pathologic lesions. If a biopsy is desired, a biopsy-taker is inserted through the channel and a specimen may be taken with accuracy under direct vision from any area of the uterine canal.

If a hysteroscopic examination is made

following an ordinary dilation and curettage of the uterus, it will be found that the curette has missed a surprising number of areas, leaving patches of hyperplasia of the endometrium. Since the hysteroscopic examination is a relatively simple procedure, it would seem best to do one after each curettage in order to be certain that all pathologic growth has been removed.

#### *Types of Growths*

Polyps of the uterine canal appear in various sizes, from very small endometrial polyps to some that fill the greater portion of the uterine canal. The small polyps will be found to float in the water with a fairly narrow pedicle; however, at times the opposite may be found in a fairly short polyp with a wide base. These polyps, which can cause much spotting and even fairly profuse bleeding, may occur in any portion of the uterine canal, or even in the cervical canal. So often missed by the curette, they may be safely and easily fulgurated under direct vision by carrying the fulguration tip through the channel of the hysteroscope, thus avoiding major surgery.

The submucosal myomas give a much wider filling defect in the original hystero-gram. As previously stated, however, they can simulate defects caused by endometrial hyperplasia. Submucosal myomas may be an active cause of uterine bleeding, even though the pelvic examination done previously may have been entirely negative for any fibroids on the serosal surface. It is doubtful whether serosal fibroids that are palpated upon examination of the serosal surface and that do not protrude into the uterine canal are the cause of uterine bleeding. If the patient who is found to have palpable serosal fibroids upon vaginal examination has an entirely normal hystero-gram, another reason for the uterine bleeding should be sought.

Endometrial carcinoma, which responds so well to surgery if detected early, may be diagnosed with the hysteroscope and confirmed, if necessary, with a biopsy under direct vision. Endometrial carcinoma often begins as a small protruding mass near the cornu. Although it may also be a diffuse carcinomatous growth involving the uterine canal, invariably it will protrude through the internal os into the cervical canal. In contrast to carcinoma, extensive endometrial hyperplasia resembling carcinoma of the

uterine canal will be found to stop abruptly at the internal os.

### Conclusion

The above method of roentgen study and direct examination by hysteroscope has the advantage of greater simplicity and accuracy over usual methods of curettage to detect benign growths, and the various vaginal stains or suction biopsies to detect carcinomatous growths.

## THUMBNAIL SKETCHES OF EMINENT PHYSICIANS

JEREMIAH BATTLE\*

DOROTHY LONG

LEXINGTON, KENTUCKY

In very nearly the same time and place as Dr. Calvin Jones, Dr. Jeremiah Battle was a physician of prominence, practicing first in Tarboro and later in Raleigh. He had matriculated, but did not graduate, with the class of 1802 at the University of North Carolina. He was well known in the locality as a capable physician, and some of his professional qualities are shown in the records of his case book, which was once owned by Dr. Hubert A. Royster and described by him in an article written a few years ago for the *Annals of Medical History*.

The most extensive account of a case is that of a Mr. Woolworth of Philadelphia, which Dr. Royster, 122 years later, diagnosed as typhoid, and for which Dr. Battle used the treatment common for fevers at that period—repeated blood-letting, diuretics, wine, opiates, and so forth. Apparently he knew when to stop the bleeding, however, for he notes in this case that when he saw his patient's "flesh go so fast," he stopped the bleeding for three weeks, and then did it only once more, upon the patient's request and against his own remonstrance. Dr. Battle, in addition to the usual treatment, used other more modern procedures, including therapeutic baths and a dietetic regimen which is still quite acceptable. Dr. Royster suggests that he may have known of the use of bathing in fevers from the writings of William Cullen (1712-1790) of Scotland.

Noticeable in Dr. Battle's notes, according to Dr. Royster, are his humor, his frankness, a belief in his remedies, and a deep interest in his patients<sup>(1)</sup>.

Another of Dr. Battle's writings which has survived is a history of Edgecombe County, sent in June, 1812, to the *Star*, the newspaper of which Dr. Calvin Jones was part owner. In this article, Dr. Battle mentioned the doctors of his county, not very favorably, writing: "There are more physicians than at any former period; who cannot boast, however, of any great erudition. Quacks are abundant, and are privileged to boast."<sup>(2)</sup>

He also includes some description of the diseases prevalent in his section, mentioning especially "Bilious fevers, Cholera Infantum," and a "Malignant double tertian" fever. "By this time," he wrote, "physicians had multiplied in proportion to the diseases, and these Bilious fevers were attacked by Emetics, Cathartics, and the Bark, & in addition to these some cooling or sweating medicines were exhibited during the hot stage. In some cases the Lancet was unknown here!"<sup>(3)</sup>

Dr. Battle added to his article a description of an epidemic of this fever in Scotland Neck, from notes made by his friend, Dr. S. J. Baker, which in addition to describing symptoms and treatments, included an account of a dissection performed on a Negro man who had died of the fever<sup>(4)</sup>.

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Do the military forces need as many physicians as they demand, even in time of war? In the last war, one out of every three physicians was called to duty, a far greater percentage than any other professional, business, or working group was called upon to furnish. In many instances these men waited interminably, assigned to specific units which took months to build up. Professionally these doctors got rusty; socially they got bored; economically they got deprived of their normal standard of living while serving as so many "bodies" in a table of organization. Wouldn't it have been better to have had pools of available physicians for assignment to the various theaters of war and to draw upon these pools as medical officers were needed? — Editorial, *California M.* 73:444 (Nov.) 1950.

\* The second of two sketches of early North Carolina physicians.



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obligation to conduct himself in accord with its ideals."—Prin-  
ciples of Medical Ethics of the American Medical Association,  
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DECEMBER, 1951

### NORTH CAROLINA'S DIPHTHERIA RATE

The recently released 1950 diphtheria rates for the various states show that North Carolina has the unenviable distinction of having the highest rate in the Union. This record is made more embarrassing by the fact that North Carolina was the first state in the Union to adopt a compulsory diphtheria vaccination law. Unfortunately, "passing a law" does not always remedy a situation; and the law requiring infants to be vaccinated within the first year of life was most difficult to enforce. Smallpox vaccination was made a requirement for admission to our public schools, hence was generally practiced—but seldom, until recently, before the sixth year of life, which marked the legal age limit for admission to the first grade of school.

The answer to our problem is one of public education to the danger of diphtheria and the effectiveness of vaccination against it. This education is the joint responsibility of the public health officials and the private physicians—especially the pediatricians and the family doctors. As Dr. John Bender said in the November issue of this journal: "The general practitioner should devote his time and energies to such commonplace diseases as whooping cough, diphtheria, scarlet fever, and measles . . . Intelligent parents are as anxious as public health authorities to have their children actively immunized against the common infections. Failure to have this done places the blame squarely on the shoulders of the family physician."<sup>(1)</sup>

It is to be hoped that every family doctor who reads this journal will read Dr. Norton's letter on page 613 of this issue, and will resolve to see that every child under his care will be given the protection afforded by the timely use of the effective immunizing agents available.

1. Bender, J. W.: Pediatrics and General Practice, North Carolina M. J. 12:540 (Nov.) 1951.

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### NO FELLOWSHIP DUES FOR THE A.M.A.

Until the House of Delegates of the American Medical Association voted two years ago to establish annual dues of \$25, the only requirement for membership in that organization was to be a member in good standing of one's state medical society. The county society was considered the unit of membership in the parent organization. In order to take part in the scientific sessions of the A.M.A. and to get the *Journal of the American Medical Association*, it was necessary to pay fellowship dues of \$12. After membership dues were voted by the House of Delegates, the fellowship dues were reduced to \$2.00 for 1951, then raised to \$5.00 for 1951. The distinction between a fellow and a member of the A.M.A. was confusing, and gave rise to much grumbling—not so much because of the money involved as the nuisance of having to pay separate dues. It will be good news to many that the Board of Trustees of the A.M.A. has decided to abolish the fellowship dues for 1952 and to recognize only one class of membership in the Association, which is covered by a single payment.

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## STATE MEDICAL JOURNAL CONFERENCE

Last year, for the first time since the memory of many a man runneth not to the contrary, the American Medical Association did not play host at its headquarters to the Annual Conference of State Secretaries and Editors. This year, on Monday and Tuesday, November 12 and 13, this conference was resumed, but the secretaries who were not editors or business managers of state journals were left out of the party. Morning and afternoon sessions were held on both days, and a dinner was given Monday evening at the Bismarck Hotel.

The program was arranged by members of the Advisory Committee of the State Journal Advertising Bureau. It is hard to single out its best features, for it was all good. Among the high lights were: "The Job of an Editor," by Mr. Walter Kahoe, director, Medical Department, J. B. Lippincott Company, followed by a panel discussion, "Literary Aspects of Medical Journalism," by Mr. Harry L. Shaw, general editor, Harper and Brothers; "Socio-Economic Medical Articles," by Mr. William Alan Richardson, editor, *Medical Economics*; and "Medical Writings as Observed by a Reader," by Dr. Roger I. Lee of Boston, a former president of the A.M.A. A very profitable part of each session, both morning and afternoon, was the question and answer period. The after dinner speaker was Wu Paak Shing, Ph.D., who spoke on "The Chinese Under the Communists' Rule."

The conference was a stimulating experience for all who attended. All the speakers were authorities in their field, and they all knew how to make their advice palatable. Mr. Kahoe, for example, said that some of the best work of editors was not seen by readers, since it consisted in "killing off" unacceptable material. He struck a responsive chord when he spoke of "the writer who will not use 100 words when 500 will express his idea almost as well." Dr. Wallace Yater, editor of the *Medical Annals of the District of Columbia*, said that the main job of an editor was fourfold: To get people to do his work for him; to find and select material; to develop new ideas; and to appease authors.

Mr. Shaw began by saying that the literary aspects of medical journalism were vir-

tually non-existent. He said that doctors needed to write more simply; to be more concrete; to give more specific instances; and not to write too quickly. "There is no such thing as good writing," he said; "there is only good re-writing."

Dr. Lee, like the other speakers, favored "clear and understandable English." He thought that many articles in the special journals were entirely too long and too clothed in the jargon of the specialty. He deplored the lack of clinical judgment shown in the interpretation of statistics, and stressed the need of a discriminating mind in writing.

All the speakers agreed that medical writing should be as simple and as clear as possible. Most of them agreed that editorials might and should deal with political subjects, but should not be partisan.

It was gratifying to learn that in the ratio of reading to advertising space the NORTH CAROLINA MEDICAL JOURNAL, with a ratio of 7 to 4, was second only to the *Pennsylvania Medical Journal's* 8 to 4. The national average was 5 to 4. It was also gratifying to learn that our state journal has had its share of advertising, and that its financial showing compared favorably with the other state journals. For this our business manager, Mr. James T. Barnes, deserves much of the credit.

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## CAROLINA HOTEL RESERVATIONS

On page 613 of this issue will be found a letter to Mr. J. T. Barnes from Mr. William Fitzgibbon, manager of The Carolina Hotel at Pinehurst. The letter is self explanatory—but attention is called to it editorially, in order that those who are unable to secure reservations at The Carolina may understand the situation. The unprecedented number of requests for accommodations must presage a record-breaking attendance for the 1952 annual meeting of the Medical Society of the State of North Carolina. It is good to know that sufficient space will be available in other hotels or cottages in Pinehurst to accommodate all who plan to attend.

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Microfilmed copies of the NORTH CAROLINA MEDICAL JOURNAL are available and may be ordered from University Microfilms, 312 North First Street, Ann Arbor, Michigan.



## CORRESPONDENCE

To the Editor:

When the 1950 diphtheria rates for the various states became available recently, the distressing fact was revealed that North Carolina had the highest rate in the nation.

This is an unenviable position in normal times and is particularly alarming at this time when extensive movements of our population are taking place and overcrowding is increased.

Every private physician has a responsibility to the infants and children under his care to advise immunization. Use of diphtheria and tetanus toxoids combined with pertussis vaccine offers a simplified method of immunization against all three of these diseases simultaneously.

Health departments have been requested to expand their health education programs relative to immunization and to establish a follow-up service in cooperation with local physicians so that parents of all infants reaching three months of age can be notified to have their children immunized, and can be re-notified if necessary.

J. W. R. Norton, M.D.

Secretary and State Health Officer  
N. C. State Board of Health

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To the Editor:

We are enclosing an opinion handed down by Circuit Judge Thomas J. Landers of Go-gebic County in *litigation between a chiropractor and the Trustees of Grandview Hospital, Ironwood, Michigan*.

Criminal charges were pressed by the chiropractor who claimed that the Trustees discriminated against him and wilfully neglected to perform duties while holding positions of public trust when they refused him the use of Grandview Hospital for his chiropractic practice.

Here are the salient points of Judge Landers' decision:

1. . . . "a public officer cannot be subjected to criminal prosecution for failure to perform duties which require the exercise of discretion on his part, where there is no element of an evil or corrupt design in his conduct."

2. The chiropractor "claims to be a practitioner of a school of medicine, . . . but we are referred to no statute or case where the legislature or a Michigan court has ever de-

fined the meaning of the term 'school of medicine'."

3. . . . "To uphold the informations and force the defendants to trial in these cases would be legislating that the term 'school of medicine' included a school where chiropractic was taught."

4. Under the terms of Act 350, Public Acts of 1913, the Board of Trustees were given the authority to determine rules for the hospital. The rules state that no person shall practice medicine in the hospital unless he has a license from the state of Michigan to practice medicine.

5. Charges against the trustees were dismissed.

We are inviting this decision to your attention because you may wish to report on it in your good journal.

L. Fernald Foster, M.D., Secretary,  
Michigan State Medical Society

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Mr. James T. Barnes, Executive Secretary  
Medical Society of the State of N. C.  
Raleigh, N. C.

Dear Mr. Barnes:

As we have been receiving a series of critical letters from various members of your Society, due to the fact that we have not been able to promise them reservations in The Carolina, I feel that it is only fair to them and to the Hotel, to try to explain the situation clearly.

Immediately after you released the announcement of the meeting, the applications came pouring in and within two days we had over 700 applications for accommodations. The Carolina, as you know, can only accommodate 450 and from that you can readily understand that a great many of your members will have to live in nearby hotels in Pinehurst who are cooperating with us. So far as we can see now, everyone will be taken care of in Pinehurst hotels or nearby cottages.

We realize that everyone wants to be at The Carolina but it is just impossible. The reservations have been treated as fairly as possible and we ask that your members will understand the situation and bear with us. There will of course be some cancellations before May and these will be allocated to members whose names appear on our waiting list and will be taken in strict rotation.

William J. Fitzgibbon, Manager  
The Carolina

## BULLETIN BOARD

### NEWS NOTES FROM THE UNIVERSITY OF NORTH CAROLINA SCHOOL OF MEDICINE

Dr. Thomas C. Butler, professor of pharmacology, served as chairman of a symposium on the theories of anesthesia at the Postgraduate Assembly in Anesthesiology in New York City on December 6.

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Dr. Nathan A. Womack, professor of surgery, gave a paper on "Endocrine Relationships in Benign Lesions of the Breast" before the Southern Surgical Association in Hot Springs, Virginia, on December 5. On December 12 he spoke to the First District Medical Society, meeting in Elizabeth City, on "The Extension of Surgery in the Treatment of Cancer."

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Dr. Geoffrey W. Harris, of the Physiological Laboratory, Cambridge, England, gave the first Medical Foundation lecture on November 19; his topic was "Neuro-Endocrine Relations."

\* \* \*

Postgraduate medical courses sponsored by the University School of Medicine and the Extension Division have been arranged at New Bern-Morehead City, Ahoskie-Edenton-Elizabeth City, and Raleigh, with the county medical societies as co-sponsors. The programs are as follows:

#### New Bern-Morehead City

January 15—

4:00 p.m. Office Gynecology

7:30 p.m. Emergencies in Obstetric Practice—  
Dr. William F. Mengert, Southwestern Medical School, Dallas

January 22—Speaker and topics to be announced.

January 29—

4:00 p.m. Prophylaxis and Treatment of Acute Infections

7:30 p.m. Infant Feeding  
Humidification in Pediatrics  
Dr. Samuel F. Ravenel, Greensboro

February 5—

4:00 p.m. Jaundice

7:30 p.m. Acute Abdominal Emergencies  
Dr. Philip Thorek, Chicago

February 12—No meeting. Week of Watts Symposium.

February 19—Speaker and topics to be announced.

February 26—

4:00 p.m. Common Foot Problems

7:30 p.m. The Knee Joint  
Dr. Allen F. Voshell, Baltimore

#### Ahoskie-Edenton-Elizabeth City

January 16—

4:00 p.m. Office Gynecology

7:30 p.m. Emergencies in Obstetric Practice  
Dr. William F. Mengert, Southwestern Medical School, Dallas

January 23—Speaker and topics to be announced.

January 30—

4:00 p.m. Acute Infections

Acute Hemorrhagic Nephritis

7:30 p.m. Infant Feeding

Humidification in Pediatrics  
Dr. Samuel F. Ravenel, Greensboro

February 6—

4:00 p.m. Jaundice

7:30 p.m. Acute Abdominal Emergencies  
Dr. Philip Thorek, Chicago

February 13—No meeting. Week of Watts Symposium.

February 20—Speaker and topics to be announced.

February 27—

4:00 p.m. Common Foot Problems

7:30 p.m. The Knee Joint  
Dr. Allen F. Voshell, Baltimore

#### Raleigh

January 17—

4:00 p.m. Lesions of the Vulva

7:30 p.m. Maternal and Neonatal Care  
Dr. John L. Parks, George Washington University School of Medicine, Washington

January 24—

4:00 p.m. The Clinical Importance of the RH Factor

7:30 p.m. Newer Treatment of Certain Digestive Disorders

Dr. Louis K. Diamond, Harvard Medical School, Boston

January 31—Virus Diseases

4:00 p.m. Topic to be announced

7:30 p.m. Topic to be announced  
Dr. Hobart A. Reimann, Jefferson Hospital, Philadelphia

February 7—

4:00 p.m. Physiological Deformities in Children

7:30 p.m. Brachialgia  
Dr. Sylvester J. O'Connor, University of Michigan Hospital, Ann Arbor

February 14—No meeting. Week of Watts Symposium.

February 21—

4:00 p.m. Important Clinical Points in Anesthesiology

7:30 p.m. The Importance of Blood Volume Studies in the Management of Surgical Patients

Dr. Morris J. Nicholson, The Lahey Clinic, Boston

February 28—

4:00 p.m. Physiology of Body Fluids

7:30 p.m. The Clinical Aspects of Fluid Balance  
Dr. Carl A. Moyer, Washington University School of Medicine, Saint Louis

### NEWS NOTES FROM THE DUKE UNIVERSITY SCHOOL OF MEDICINE

Duke Hospital patients this week began reading their favorite novels off the ceiling. A newly-acquired "ceiling reader" installed recently by the Duke Hospital Women's Auxiliary projects book pages on the ceiling above the bed, and a push-button enables patients to turn pages easily and quickly.

The machine, smaller than a portable typewriter, is placed on the floor, is plugged in, and the pages are projected onto the ceiling. The film-book, on a spool like a typewriter ribbon, can be turned forward or backward by the push-button.

Along with the machine, the Duke Auxiliary, as a starter for a library, ordered a dozen book-films ranging from "Little Black Sambo" for the children to "Mail Call" for adults. There is one on handicraft for the handicapped.

### NEWS NOTES FROM THE BOWMAN GRAY SCHOOL OF MEDICINE OF WAKE FOREST COLLEGE

Dr. Coy C. Carpenter was honored by the faculty of the Bowman Gray School of Medicine of Wake Forest College on November 28, on the occasion of the unveiling of his portrait. The portrait, painted



by Leopold Seyffert, Jr., of New York, was prepared on commission of the faculty of the medical school to honor Dr. Carpenter for his fifteen years' service as dean.

Dr. Carpenter joined the faculty of the two year School of Medical Sciences, located at Wake Forest, North Carolina, and ten years later succeeded Dr. Thurman D. Kitchin as its dean. He was still serving in that capacity in 1941, when the medical school was expanded to a four year medical college and removed to Winston-Salem under the name of the Bowman Gray School of Medicine of Wake Forest College.

The inscription on the plaque reads: "Coy Cornelius Carpenter, M.D. Portrait presented by the Faculty of the Bowman Gray School of Medicine of Wake Forest College in acknowledgment of his contribution to the advancement of the College and its Medical School."

Dr. Paul Whitaker, of Kinston, who served as toastmaster at the banquet, followed the growth of the institution, recognizing the contribution to the institution by the faculty. Dr. Wingate Johnson, professor of clinical internal medicine at the institution, speaking for the faculty, presented the portrait to the college, saying, "It is altogether fitting that Dr. Carpenter's portrait should be next in the gallery, since he, more than anyone else, is responsible for the respectable place that Bowman Gray occupies in the field of medical education." Dr. Harold W. Tribble, president of Wake Forest College, accepted the portrait on behalf of the college, and praised the achievements of the school, declaring, "What has been accomplished at our medical school is due more to the fortitude, courage, and ability of the dean than to any other person."

The portrait hangs in the lobby of the medical school building, with that of the late Bowman Gray, for whom the school is named and whose financial assistances made possible the expansion and removal of the two-year medical school to Winston-Salem. The portrait of Mr. Odus M. Mull, who was instrumental in the move, hangs in the library of the medical school.

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Dean Carpenter has recently announced the appointment of Dr. Parker R. Beamer as associate dean. Dr. Beamer will continue to serve in the capacity of professor and director of the Department of Microbiology, the position to which he was appointed in 1948. As associate dean, Dr. Beamer will serve as chairman of the Admissions Committee, in addition to matters of curriculum, education, and student activities.

#### ECUSTA PAPER CORPORATION MEDICAL CENTER

Members of the Transylvania County Medical Society were guests of honor at the open house and dedication of the new medical center of Ecusta Paper Corporation at Pisgah Forest, North Carolina. Dr. G. H. Gehrman, medical director of E. I. du Pont de Nemours and Company, introduced the principal speaker, Dr. Edward C. Holmblad, managing director and treasurer of the Industrial Medical Association. Dr. W. R. Berryhill brought greetings from the University of North Carolina School of Medicine; Dr. Haywood Taylor, from the Duke University School of Medicine, and Dr. George T. Harrell, from the Bowman Gray School of Medicine of Wake Forest College.

The medical center was formally presented to the medical department staff by John W. Hanes, president of Ecusta Paper Corporation, and accepted by Dr. Mac Roy Gasque, medical director.

#### NORTH CAROLINA TUBERCULOSIS ASSOCIATION

At ground-breaking ceremonies held at the University of North Carolina recently, the fourth of the state's tuberculosis hospitals was formally begun. The proposed \$1,100,100 sanatorium, a part of the \$10,000,000 State Health Center being established at Chapel Hill, will be administered by the State Sanatorium Board.

The building is named for L. Lee Gravely and the late Mrs. Gravely. Gravely, a Rocky Mount business man and legislator, is chairman of the board of directors. He has for years kept the need for greater and better treatment facilities before the state legislators to the extent that each appropriation has meant to some a "Gravely Victory."

Other persons appearing on the program were William D. Carmichael, Jr., vice-president and comptroller of the consolidated University; Dr. H. S. Willis, superintendent of the North Carolina Tuberculosis Sanatoria; the Rev. W. M. Howard, Jr., pastor of the University Methodist Church, and the Rev. Carlos P. Womack, Chaplain, McCain Sanatorium. Frank W. Webster of NCTA was present at the ceremony.

#### FIFTH DISTRICT MEDICAL SOCIETY

The Fifth District Medical Society held its annual fall meeting at the North Carolina Sanatorium, McCain, on November 15, 1951. Scientific papers were given by Dr. Nathan A. Womack, Dr. Charles H. Burnette, Dr. W. C. Sealy, and Dr. J. L. Callaway. The president-elect for the next year is Dr. R. L. Murray, Raeford, vice-president-elect Dr. Claude Milham, Hamlet, and re-elected secretary-treasurer, Dr. J. S. Hiatt, Jr., McCain. Dr. Hiatt was also elected counselor for the Fifth District, and Dr. Robert McMillan, Southern Pines, North Carolina alternate counselor.

Incoming president of the society is Dr. William F. Hollister, who succeeds Dr. L. R. Doffermeyer.

#### SEVENTH DISTRICT MEDICAL SOCIETY

The Seventh District Medical Society held a meeting at Monroe, North Carolina, on November 28. In the absence of Dr. C. H. Pugh, president, Dr. Clem Ham presided.

Subjects and speakers for the afternoon session were: "Ruptured Appendix—A Review of 85 Cases Surgically Treated," Dr. Francis B. Lee, Monroe; "Experience with the North American Male Frog Test," Dr. W. M. Smethie, Wadesboro; "Case Report—Massive Tumor of Parotid Gland," Dr. Joseph F. Patterson, Albemarle; "A Layman's Experience with a Colostomy," Stanley Z. Pollock, Lincolnton; "Diagnosis and Treatment of Upper Gastrointestinal Condition," Dr. Colin Munroe, Charlotte.

Dr. Frederic C. Hubbard, president of the State Medical Society, addressed the evening session, followed by a scientific address, "The Management of Erythroblastosis Fetalis," by Dr. J. Buren Sidbury of Wilmington.

Newly elected officers of the society are Dr. Clem Ham, Monroe, president; Dr. James F. Reinhardt, Lincolnton, vice president; Dr. Edward S. Bivens, Albemarle, secretary.

#### CARTERET COUNTY MEDICAL SOCIETY

The Carteret County Medical Society held its regular monthly meeting at the Morehead City Hospital Monday night, November 12. This was a dinner meeting, the hospital acting as host. Dr. C. S. Maxwell, president, presided.

There was no formal scientific paper presented,

but several matters of general interest were discussed. Among them were the matter of a postgraduate medical course to be held in New Bern in January and February, and the Sunday emergency medical and surgical service. The postgraduate medical course is a part of the general extension work of the State University Medical School, and will be sponsored jointly by the Carteret and Craven Medical Societies.

A year round Sunday emergency medical and surgical service is being provided by the physicians of the county on a rotating basis, in order that such service may be promptly available in all Sunday emergencies, through the Morehead City Hospital.

Dr. P. T. Myers, radiologist, of Kinston, who has been employed for the past two or three years by the Morehead City Hospital to interpret x-ray films, resigned as of December 1, stating that he was returning to his native state, Iowa.

Dr. N. Thomas Ennett, Carteret County health officer, called attention to the schedule of the state x-ray trailer, which was to be in the county November 27-30, in the interest of tuberculosis control. The trailer was secured through Dr. W. A. Smith, director of the Tuberculosis Division of the State Board of Health.

Dr. Grady C. Cooke of Morehead City, formerly of Winston-Salem, was received into membership of the Carteret County Medical Society.

Visitors were Drs. Barefoot and Nance of Havelock, North Carolina.

N. THOMAS ENNETT, M.D.,  
Corresponding Secretary

### NEWS NOTES

Dr. Charles M. Howell, Jr., has announced the opening of offices in Winston-Salem. Practice will be limited to allergy and dermatology.

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Dr. G. Aubrey Hawes and Dr. Cecil J. Hawes have announced the removal of their offices to the Hawes Clinic, 1333 Romany Road, Charlotte.

### MISSISSIPPI VALLEY MEDICAL SOCIETY 1952 ESSAY CONTEST

The twelfth annual essay contest of the Mississippi Valley Medical Society will be held in 1952. The Society will offer a cash prize of \$200, a gold medal, and a certificate of award for the best unpublished essay on any subject of general medical interest (including medical economics and education) and practical value to the general practitioner of medicine. Certificates of merit may also be granted to the physicians whose essays are rated second and third best. Contestants must be members of the American Medical Association, and residents and citizens of the United States. The winner will be invited to present his contribution before the seventeenth annual meeting of the Mississippi Valley Medical Society to be held in St. Louis, Missouri, October 1, 2, 3, 1952, the Society reserving the exclusive right to first publish the essay in its official publication—the *Mississippi Valley Medical Journal* (incorporating the *Radiologic Review*). All contributions shall be typewritten in English in manuscript form, submitted in five copies, not to exceed 5,000 words, and must be received not later than May 1, 1952. The winning essays in the 1950 contest appear in the January 1951 issue of the *Mississippi Valley Medical Journal* (Quincy, Illinois.)

HAROLD SWANBERG, M.D., Secretary

### AMERICAN MEDICAL ASSOCIATION

The forty-eighth annual Congress on Medical Education and Licensure will be held February 10-12, 1952, at the Palmer House in Chicago.

The congress is conducted under the auspices of the Council on Medical Education and Hospitals of the American Medical Association and the Federation of State Medical Boards of the United States.

The program will follow the general pattern of previous years, except that the Federation will hold a business meeting Sunday afternoon, February 10, and will not schedule a scientific program for Tuesday afternoon, February 12.

An open meeting of the Advisory Board for Medical Specialties will be held on Sunday, February 10, immediately preceding the Congress.

It is important to refer to the Annual Congress on Medical Education and Licensure when writing to the Palmer House for reservations.

### AMERICAN COLLEGE OF SURGEONS

At the annual meeting of the Governors and Fellows of the American College of Surgeons held in the Civic Auditorium in San Francisco on Thursday afternoon, November 8, 1951, the following officers were elected for the term 1952-53: president-elect: Harold L. Foss, M.D., Danville, Pennsylvania; first vice president: Robert H. Kennedy, M.D., New York; second vice president: Thomas F. Mullen, M.D., San Francisco.

These officers will be installed at the 1952 Clinical Congress in New York on September 22.

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Nine-hundred and three initiates were received into fellowship and three honorary fellowships were conferred by the American College of Surgeons at the Convocation on Friday evening, November 9, which was the closing session of the thirty-seventh annual Clinical Congress in San Francisco. The fellowships were conferred by Dr. Alton Ochsner of New Orleans, president of the College. The fellowship address was delivered by Dr. J. Roscoe Miller, of Chicago, president of Northwestern University.

The following initiates from North Carolina were received into fellowship:

Kyle E. Black, Salisbury; Harold J. Bradley, Greensboro; Guy H. Branaman, Jr., Raleigh; Julian C. Brantley, Jr., Rocky Mount; Jesse B. Caldwell, Jr., Gastonia; Ronald E. Crissey, Elizabeth City; Everette J. Dunning, Charlotte; W. Russel Floyd, Concord; Walter S. Hunt, Jr., Raleigh; C. Hal Ingram, High Point; Michael F. Keleher, Asheville; Charles E. Kernodle, Jr., Burlington; John R. Kernodle, Burlington; Robert H. LeGrand, Greensboro; J. Kingsley MacDonald, Charlotte; James B. Martin, Burlington; L. Thomas Morton, Lincolnton; Richard T. Myers, Winston-Salem; Jack H. Neese, Elon College; Hubert M. Poteat, Jr., Smithfield; C. Lowry Pressly, Charlotte; Henry D. Severn, Asheville; Kenneth S. Tanner, Jr., Rutherfordton; Joseph M. Walker, Jr., Winston-Salem; James S. Wilson, Durham; Creighton Wrenn, Mooresville.

### AMERICAN COLLEGE OF RADIOLOGY

Dr. Bernard W. Robinson, of the Department of Radiology, Providence Hospital, Chicago, made a study of 302 cases of cancer in the Negro and found that malignancy behaves about the same in all races under comparable situations and in similar environments.

He reported his study in the November issue of the *American Journal of Roentgenology and Radium Therapy*, which is published primarily for physicians who specialize in x-ray diagnosis and treatment.



"One fact which impresses itself," he continued, "is the marked predominance of malignancy in the Negro female in comparison to the male. Not only does breast pathology and pathology of the female reproductive system take up over 60 per cent of this series, but also female malignancy plays a large part in gastrointestinal cancer and in the 28 miscellaneous cases of which 17 were women."

### AMERICAN TRUDEAU SOCIETY

The American Trudeau Society, Medical Section of the National Tuberculosis Association, has issued an invitation to physicians to submit papers for presentation at the annual meeting in Boston, May 26-30, 1952.

The abstracts or complete papers must be on scientific or clinical subjects relative to tuberculosis or non-tuberculous respiratory and cardiac diseases, and should be limited to 300 words. The ATS Subcommittee on Medical Sessions, Annual Meeting Program Committee will review the papers and select the most interesting material for possible inclusion on the program.

All papers submitted must reach Dr. Theodore L. Badger, Chairman, Medical Sessions Subcommittee, American Trudeau Society, 1790 Broadway, New York 19, New York, not later than January 1.

### DEPARTMENT OF THE ARMY

#### Army Medical Service Using Improved Insecticides To Combat DDT-Resistant Korean Lice

The Army Medical Service, in cooperation with the U. S. Department of Agriculture, has developed and is now using in Korea new insecticidal formulations capable of controlling Korean body lice which are resistant to DDT, the Department of the Army has announced.

Use of the new preparations of lindane and pyrethrum louse powder, ensures the continued freedom of United Nations forces from louse-borne epidemic typhus which could be introduced by infected North Korean and Chinese prisoners of war. Both substances are highly effective against the Korean louse and have been tested and declared safe for human use by the Army Environmental Health Laboratory, Edgewood, Maryland.

DDT is still highly effective against lice and other insects in this country and, as far as is known, most other areas of the world. Both lindane and pyrethrum powder actually are less potent than DDT against lice in the United States.

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#### Army-Navy Medical Team Cuts POW's Dysentery Rate Sharply

The alarmingly high rate of dysentery among Chinese and North Korean prisoners of war in Korea has been reduced 75 per cent by a team of Army, Navy, and civilian medical experts as the first step in a continuing program to curb dysentery throughout Korea, the Department of Defense has announced.

### VETERANS ADMINISTRATION

John D. Alderman, at present personnel officer of the VA Hospital at Oteen, North Carolina, has been appointed assistant manager of the VA hospital at Lake City, Florida.

Mr. Alderman first entered the employ of VA in December, 1945, as chief of the classification division in the former Atlanta, Georgia, branch office. He has held three other responsible positions in VA since then.

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A physician who headed the paraplegic service at the Veterans Administration hospital in Richmond, Virginia, and was himself a paralysis victim, was recently memorialized with the establishment of a research fund for paraplegia by his former patients, doctors and nurses. The physician was Dr. William Warren Sager, who died at his post in September, 1951, after having served as chief of the cord injury service at the Richmond hospital since November, 1949. During the entire period, he was confined to a wheelchair.

The fund, to be used in furthering research in the field of spinal paralysis, will be administered by the National Paraplegia Foundation. The initial contribution to the fund was made by the Virginia Chapter of Paralyzed Veterans of America, members of which are former or present patients of the Richmond hospital.

\* \* \*

Veterans Administration has announced that it is trying to solve the problem of providing hospitalization and outpatient treatment for several thousand veterans with mental illnesses who might qualify for such care under a new law.

The new law (Public Law 239, enacted October 30, 1951) provides that for the purpose of VA hospital and medical care, including outpatient treatment, World War II veterans and those with service since June 27, 1950, who develop an active psychosis within two years from the date of separation from active service shall be deemed to have incurred the disability in active service.

VA is now faced with the task of reviewing the cases of approximately 9,000 World War II veterans awaiting hospitalization who have psychosis classified as nonservice-connected. Those found eligible will be reclassified as service-connected which gives them a priority for hospitalization and makes them eligible for outpatient treatment.

Those now on waiting lists for hospitalization need not file new applications as their cases will be automatically reviewed.

### FEDERAL SECURITY AGENCY

#### Public Health Service

The Public Health Service, Federal Security Agency, recently announced publication of **Environment and Health**, the first book in the Service's 153 year history dealing comprehensively with environmental health.

A limited edition of **Environment and Health** has been published for distribution to health departments, sanitary engineers, schools of public health, and other professional audiences. The book is intended to serve both as a review of environmental health of the times and as a textbook for students of public health. Copies are available from the Superintendent of Documents, Government Printing Office, Washington 25, D. C., at 75 cents each.

\* \* \*

Vital statistics now available reveal that deaths from heart disease and cancer among children of school age exceed in number deaths from all infections and parasitic diseases combined, it was announced by the Federal Security Agency.

The announcement is based on a study by the National Heart Institute of the National Institutes of Health, Public Health Service, of population mortality figures compiled by the National Office of Vital Statistics.

In 1948, the latest year for which complete figures are available, the study revealed cardiovascular disease and cancer deaths—with rheumatic heart disease and leukemia the leading causes—totaled 4,514 in the 5 to 19 age group. In compar-

ison, the infectious and parasitic diseases—with tuberculosis the chief cause of death—accounted for 3,990 deaths in the same age group.

"It should be emphasized that the comparison is only relative," Dr. Leonard A. Scheele, Surgeon General of the Public Health Service, pointed out. "Actually, there has been an over-all decline in the number of all deaths from diseases in childhood, including those due to both heart disease and cancer. But the decline in the infectious and parasitic diseases has been overwhelmingly greater. This can be attributed for the most part to the antibiotics and improved measures for detecting and preventing these diseases."

The report shows that the death rate from infectious and parasitic diseases in the 5 to 19 age group dropped from 48.2 per 100,000 in 1933 to 11.5 per 100,000 in 1948. During the same period heart and cancer deaths in the group dropped from 19.8 to 13.0 per 100,000 persons. Accidents, however, continue as the leading cause for all deaths in the age group, totaling 11,348 in 1948, or a rate of 32.8 per 100,000 children.

#### B-D Introduces Sheer Full-Footed Elastic Hosiery

Full-footed, sheer, form-fitted ACE Elastic Hosiery, knit of nylon-covered rubber thread, has been introduced by Becton, Dickinson and Company, of Rutherford, New Jersey.

The full foot in ACE Elastic Hosiery insures positive anchorage at the toe, and provides a radically new, improved type of "suspension support" to structures of the leg. Since the hosiery has a "two-way" stretch, it does not have to rely solely on pressure around the circumference of the leg for support, and can be knit of lighter weight thread, making it cooler and more comfortable.

ACE Elastic Hosiery overcomes many patients' objection to supportive hose in that it is not necessary to wear overhose. This eliminates the unattractive bulkiness and unsightly wrinkles which in the past have made it obvious that the patient was wearing elastic hosiery. ACE Elastic Hosiery is offered in a neutral shade of beige and is hardly discernible from service weight nylons on the leg. Women will not object to wearing the new hosiery anywhere—at the office, on the street, or even to the theater.

Becton-Dickinson has developed a "CalcuFit" simplified method of fitting ACE Elastic Hosiery, and physicians are supplied with special charts for the rapid determination of the size hose required for any patient.

#### Dr. John Mote Named Medical Director at Smith, Kline & French Laboratories

Dr. John R. Mote, noted research scientist responsible for much of the clinical development of ACTH, has joined the Research & Development Laboratories of Smith, Kline & French Laboratories as medical director.

Formerly medical director and assistant general manager of Armour Laboratories, Chicago, Dr. Mote will assume his new post with the Philadelphia pharmaceutical research and manufacturing firm in September.

In his active medical career, Dr. Mote has participated in medical research and medical instruction, as well as serving during World War II, first with the American Red Cross and then in the Navy.

After the war, Dr. Mote joined Armour Laboratories, and as medical director supervised the clinical work made on the newly discovered endocrine agent, ACTH. He became assistant general manager of that firm last year.

#### New Method Found to Combat "Diaper Rash"

Ammonia fights ammonia in a new method found by physicians here to combat "diaper rash."

Developed by Doctors William Pfeffer, Jr., and Clement A. Smith, Children's Medical Center, Boston Lying-In Hospital, the method involves rinsing the diapers in a quaternary ammonia compound that inhibits the urea-splitting organisms, particularly bacterium ammoniagenes, commonest cause of the erythema ammoniacal dermatitis, medical name for "diaper rash."

The two physicians have reported on their findings in the *Journal of Pediatrics*. Diapers were washed and rinsed as usual, using a synthetic detergent instead of soap. After washing and immediately before drying, the diapers were given a final rinse in 1:5000 Roccal dilution (1 teaspoonful of 10 per cent Roccal to 2 quarts of tap water), wrung out, and hung up to dry. Diapers prepared in this way were indistinguishable in color, softness, and odor from diapers prepared without Roccal.

Roccal is a quaternary ammonia compound developed in the laboratories of Winthrop-Stearns, Inc. It is available in retail drug stores. An efficient well tolerated dilution for rinsing diapers is one teaspoonful of Zephiran Concentrate in 2 quarts of tap water.

#### Schenley Labs Send Officials on Survey Abroad

Seven executives of Schenley Laboratories, Inc., headed by Arthur C. Emelin, president of the Schenley Industries, Inc., affiliate, have departed for a thirty day investigation of current operations by pharmaceutical companies in three European countries. The purpose of the trip, according to Emelin, is to assist pharmaceutical associates abroad—particularly in the production of antibiotics—and to study recent progress in pharmaceutical research and manufacturing.

The party will proceed directly to Ludwigshaven, Germany, for roundtable conferences with executives of Badische Anilin and Soda Fabrik, and will visit the Bayer Company at Leverkusen, Germany, for similar conferences.

Afterwards, the party will fly to Paris, France, where the Sofrapen Company has operated since July, 1948, a penicillin production plant designed by Schenley.

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## BOOK REVIEWS

**Preventive Medicine and Hygiene** (Originally by Milton J. Rosenau, M.D.) Ed. 7. By Kenneth F. Maxcy, M.D., Professor of Epidemiology, the Johns Hopkins University School of Hygiene and Public Health. 1,462 pages. Price, \$14.00. New York: Appleton-Century-Crofts, Inc., 1951.

Students and practitioners of medicine and public health will welcome this long awaited revision of Rosenau's **Preventive Medicine and Hygiene**. The period of 16 years separating the publication of the sixth and this new seventh edition has been characterized by a very rapid expansion in our knowledge and experience in the fields of preventive medicine and public health; scope has broadened and emphasis in many areas has changed markedly. In the light of these advances the new author of this text, Dr. Kenneth F. Maxcy, and his 26 collaborators have done a particularly creditable job of reorganization and rewriting. New information, new concepts, and up-to-date authoritative opinion on a wide range of subject matter that is often not readily available, is expertly condensed in this new volume.

This text contains major sections dealing with the prevention of communicable diseases, nutrition and deficiency diseases, maintenance of health and prevention of disability, food sanitation, environmental medicine, industrial hygiene and diseases of occupation, sanitary control of water supplies, sewage and refuse disposal, methodology, public health organization and activities. Increased attention is given to the prevention of noninfectious disease, to the maintenance and promotion of health of the middle and older age groups, and to community health resources. In the reviewer's opinion, the only major omission in this new edition is a section dealing with hereditary factors in disease and the increasingly important preventive and control measures based on modern genetic concepts and proven experience.

This new revision of Rosenau is highly recommended. Dr. Maxcy has proven himself a worthy successor to the authorship of a textbook that has always maintained the highest of quality and respect in its field.

**Technical Methods for the Technician.** By Anson L. Brown, M.D. Ed. 4. 784 pages. Price, \$10.00. Columbus, Ohio: Printed and published by the author, 1950-51.

This is an amazing, amusing, and confusing book. The author operates a large pathological laboratory in Columbus, Ohio, and the work is an outgrowth of material presented to technical students in his establishment. Its various sections outline laboratory apparatus and procedures of all kinds, and are profusely illustrated by drawings and reproductions of photographs. Since the quality of the information thus imparted is very uneven, the book will be of little use to those for whom it is intended—beginning technical students. For example, the reader is informed that pus cells in the urine are always round (which they are not), and that they may be reported as "occasional, few, many, and millions." This latter term is usually used in laboratories as an expletive rather than an adjective, and in the interest of good usage is best left so.

Many of the sections are preceded by quotations, usually from the author, which run the gamut of platitudes, homilies and nonsequiturs. We are told that: "Laboratory tests are aids to diagnosis"; "The

white count is a symptom of a disease, and it must be borne out by clinical findings"; "A blood test is a symptom of a disease—does it bear out the clinical findings?" From this, properly interpreted, we find that Dr. Brown considers a person who orders a blood count to be suffering from a disease.

This book cannot be recommended to anyone but a former associate of Dr. Brown's, to whom it would serve as a memento.

**A Textbook of Pathology.** Pathologic Anatomy in Relation to the Causes, Pathogenesis, and Clinical Manifestations of Disease. By Robert Allan Moore, M.D., Edward Mallinckrodt, Professor of Pathology, Washington University School of Medicine. 1048 pages, with 501 illustrations. Price, \$12.50. Philadelphia: W. B. Saunders Company, 1951.

The first edition of this book, published in 1945, was given a most complimentary reception by pathologists in general, and by many clinicians. In some respects, it offered a departure from the usual textbook in this field, in that many of the degenerative diseases were presented as disturbances in metabolism rather than as distinct anatomic types. This was the author's attempt to emphasize the physiologic and chemical factors in disease. Furthermore, discussions of diseases were arranged according to causation, diseases with similar etiology being grouped together. Where causal agents were unknown or obscure, the disease was discussed in the section dealing with that organ or system.

Several additions, deletions, and substitutions have been made in the current edition, although the general content is closely similar. New chapters on enzymes and diseases of the aged are included. Some chapters have been rearranged for better correlation or for the incorporation of new information. These are only a few examples of the improvements which have been made to bring the text up to date.

In general, the bibliography includes many references to recent significant investigations. The author's classification of references in each chapter facilitates the task of those who wish to examine the original publications on a certain subject. Most of the illustrative material is well chosen, but many of the reproductions could be improved in an effort to make them more helpful to the student. The new, double-column format is attractive, and, in this reviewer's opinion, facilitates reading.

This reviewer, having been a member of Dr. Moore's staff for several years, is somewhat favorably prejudiced perhaps. However, being as objective as possible, any observer would conclude that this book represents an outstanding contribution in this academic discipline. The sections on clinicopathologic correlation are noteworthy, and increase the value of the context to the medical student, as well as to those who will use the book, only on occasion, as a source of reference. The amount of useful, accurate information contained within the relatively short space of 1,022 printed pages is truly impressive.

**Color Atlas of Morphologic Hematology.** By Geneva A. Daland. Edited by Thomas H. Ham, M.D. Illustrations by Etta Piotti. 74 pages. Price, \$5.00. Cambridge, Massachusetts: Harvard University Press, 1951.

This volume, prepared by Miss Daland, who is chief laboratory technician in hematology at the Thorndike Memorial Laboratory in Boston, is intended to serve as a companion piece to Dr. Ham's syllabus of laboratory examinations, also published

by the Harvard University Press. As stated on the fly leaf, it furnishes a guide for reference in the study of peripheral blood films stained with Wright's stain. The coverage of various diseases of the hemopoietic system is adequate, and the quality of the reproductions is excellent.

Most medical students and physicians not primarily concerned with hematology feel the need of a blood cell atlas of some sort as an aid to their interpretation of blood films, and this volume, which is inexpensive as far as such a handsome work is concerned, should satisfy their wants. The users of such atlases should not expect that any book will solve problems that only experience can resolve, and this book is no exception. There is always a hiatus between the "picture in the book" and the cell that one puzzles over at the moment, and drawings in general always leave the reader a little suspicious that the artist has put in something that is not there. Unlike many atlases, in which the cells illustrated are stained with little-used materials, this one sticks to Wright's stain and thus is more "believable"; and the quality of the illustrations is such as to inspire confidence.

The accompanying text is modest in scope and avoids controversy, in so far as that is possible. Although this reviewer would take exception to some of the terms and concepts, in general they are in keeping with current ideas. The book is recommended to anyone seeking an atlas, but the user must keep in mind that it is intended as an adjunct to other texts and not as a text in itself.

**Outline of Fundamental Pharmacology.** By David Fielding Marsh, Professor and Head of the Department of Pharmacology, West Virginia University School of Medicine, Morgantown, West Virginia. 242 pages, with 19 illustrations. Price, \$6.00. Springfield, Illinois: Charles C. Thomas, 1951.

The fundamental purpose of this book is to explain to non-pharmacologists the viewpoint and principles of research used by the pharmacologist. For those unacquainted with the methods and problems of drug investigation such as medical students, chemistry students, and graduates in these fields, it provides an easy and comprehensive introduction to the subject of pharmacology. For those in related fields of investigation such as physiology, bacteriology, and, particularly, clinical medicine, it might be considered a "readers' guide to pharmacology." While the book contains extensive references to the basic books and papers which form the reference library of a pharmacologist, no attempt has been made to provide a complete bibliography on the topics covered.

The book as a whole might be regarded as the plea of a pharmacologist to other research workers to make more use of the fundamental methods of pharmacology. Particular emphasis is placed on the statistical handling of data, and on the preconsideration of statistics in the planning of experiments. Biologic variation, variation in the response to drugs, and the pharmacologist's method of handling these variations in bioassay and biocomparison are well presented and well illustrated with data from the author's work. Other sections present discussions of localization of action sites of drugs, the mechanics and dynamics of absorption and distribution, the fate of drugs, including their biotransformation and excretion, the mechanism of the action of drugs, and, finally, the relationship of chemical structure and biologic activity. In each section an attempt is made to discuss the pertinent problems rather than the actual techniques involved in their solution.

Criticisms of the book which could be raised, deal

principally with the omission of seemingly pertinent topics and with apparent imbalances in the treatment of certain subjects. For example, the problems involved in the finer localization of the sites of action of drugs in terms of enzymes are inadequately treated, while the problems concerned in the renal excretion of drugs are scarcely mentioned. More specifically, the problems of enteric medication are omitted from the discussion of the oral route of administration. On the all important topic of the relationship of chemical structure and activity or biochemopharmacology, 30 pages are devoted to a compilation of the effects of even the rarest of elements such as inorganic ions, while the wide field of the effect of changes in the structure of organic compounds is treated in only eight pages. This treatment does not appear to be in keeping with the relative importance of these two subjects in pharmacology. An extensive listing of definitions related to pharmacy in one chapter also seems out of place in a book of this type.

As a whole this book should impress favorably those little acquainted with pharmacology. It may also appeal to researchers in allied fields, especially if they cross the borders of the wide field of investigation concerning the biologic action of chemical substances.

**Handbook of Nutrition.** Prepared under the Auspices of the Council on Foods and Nutrition of the American Medical Association. Ed. 2. 715 pages. Price, \$3.75. Philadelphia: The Blakiston Company, 1951.

The *Handbook of Nutrition* is a symposium by leading authorities in the field of nutrition, prepared under the auspices of the Council on Foods and Nutrition of the American Medical Association.

The book is divided into four general sections. The first, on "Individual Nutrients," deals with a general consideration of the principle groups of food stuffs, minerals and vitamins. Section two is a discussion of "Nutritional Needs" in health and under conditions of physiologic stress and disease. Section three discusses "Nutritional Deficiencies," with a discussion of the clinical syndromes, accessory clinical findings, and the physiologic basis for treatment, including dietary interrelationship, caloric requirements, fluid therapy, and the management of vitamin and mineral deficiencies. Section four takes up "Foods of Plant and Animal Origin," and their nutritional qualities.

The material has been critically evaluated and presented in a factual, readable fashion, lending itself readily to interpretation and direct clinical utilization. An excellent and comprehensive bibliography is provided.

The handbook is recommended to all students and practitioners of medicine.

#### **Armour to Stage International Symposium On Chemistry of ACTH**

Armour and Company will sponsor an international symposium in the Palmer House in Chicago September 18 at which leading European and American biochemists will discuss the chemistry of ACTH.

The conference will follow within a few days the Jubilee meeting celebrating the seventy-fifth birthday of the American Chemical Society, together with the meetings of the International Chemical Congress and the International Chemical Union, in New York and Washington.

Many prominent foreign chemists will be in the United States for these sessions, most of them as guests of American chemical and pharmaceutical organizations.



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## KEY TO ABBREVIATIONS

Aux—Auxiliary  
C—Correspondence  
C&O—Committees and Organizations  
CPC Clinicopathologic Conference

PM—President's Message  
TS—Thumbnail Sketches of  
Eminent Physicians

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